CHANGE SERVICE REQUESTED

February 29, 2008 Volume 30 Number 9 www.processor.com



Unifying Your SME's Communications

Email, Telephone & IM Can Be Combined As A Single Solution

by Bruce Gain

THERE HAS BEEN A LOT of discussion recently about unified communications and how the technology is touted as the next big thing in IT. For several reasons, the attention is justified.

Along with the proliferation of communications technology, the fundamental task of contacting someone in an enterprise has gotten that much more complicated

A typical user will have an email address, cell and landline numbers, an instant messaging screen name, and, increasingly, memberships with social networking sites. When trying to maintain always-on access, knowing the best way to contact someone through any one of the available channels at a given time is becoming increasingly difficult. However, unified communications, or UC, could help remedy the dilemma.

"Unified communications integrates these traditionally separate silos of communication together into a unified system," says Ira Herman, co-CEO of Logic IT Consulting (www.logicitc.com).

The Concept

Unified communications remains a fairly nascent technology, so descriptions about what it is and what it can do vary. A hardware vendor might claim a box it sells, which combines voice, email, and videoconferencing, is what you need to implement the technology. A consulting firm might instead offer an approach that combines software and hardware solutions from several third parties that might, for example, converge voice and Web conferencing applications. Still, both of these approaches are not off the mark. In the big-picture sense, unified communications is often about streamlining an enterprise's means of communications into a single approach.

Adding unified communications to your network infrastructure is not a "single event," says Denny Michael, vice president of marketing at AVST (www.avst.com), a communications solutions provider. "Unified communications implementation is made up *Go to Page 10*



Least Privilege Gains Popularity

Weighing The Pros & Cons Of This Security Tactic

by Chris A. MacKinnon

A COMMON PREDICAMENT that IT administrators find themselves in is trying to decide what access rights to give users who need to complete typical user tasks. In fact, the predicament has been around at least as long as the Internet and networks have been around. Enter the concept of "least privi-

lege." The idea behind this concept is that employees should only be given access to systems and resources that they require to perform their duties. This concept has also been around for a while, and it's starting to make its way back into the IT industry.

Andre Muscat, director of engineering at GFI Software (www.gfi.com), says the concept of least privilege finds its origin in

The concept of least privilege is starting to make its way back into the IT industry.

a 1975 paper titled "The Protection of Information in Computer Systems" by Jerome Saltzer and Michael Schroeder. Muscat says, "The principle states that all users who have a user account are given the absolute minimum permissions to complete a task and nothing more. The principle is simple, and when correctly applied, it can greatly increase security on your network and reduce risk."

Under The Radar

Least privilege has been largely under the radar in the commercial security space due to strategies such as endpoint and network security taking its place. Muscat says a possible reason is that many companies believe the systems they have in place to protect the network from malicious activity are enough and consider hardening the network from within a waste of time and effort. "Companies tend to underestimate the threat posed by insiders. They focus their efforts on strengthening perimeter security against attacks that stem from outside their IT infrastructure—underestimating the fact that their employees have privileges that circumvent perimeter security," Muscat says.

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■ 2X released 2X ApplicationServer 6, which

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allows users to publish and manage Windows applications from remote desktops through screen updates. Akorri released Balance-Point 2.0 management software for virtualized data centers.

Cathird launched Hypervisor-Shield, an advanced security appliance that defends against network access threats and attacks.

Dell introduced the Dell Storage Simplification Assessments portfolio to simplify the evaluation and selection of storage, backup. recovery, and archiving environments. Dickson announced Dickson Graph-at-a-Glance Flat Panel Temperature and Humidity Data Loggers. ■ HP expanded the HP Blade-System portfolio with an Integrity blade designed to handle memory-intensive workloads. Intermedia released Secure Mail software as a service for Microsoft Exchange. ■ Network Appliance launched the StoreVault S550, which is ideally suited to the archiving needs of small to medium-sized enterprises. ■ RELDATA introduced Adaptive Storage Wizards for the

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SECURITY

CLIENTS FEBRUARY 29, 2008

Information On The Go

Webalo Mobile Dashboard Provides Real-Time Intelligence

FOR COMPANIES THAT NEED to provide executives and other mobile decision makers with real-time business intelligence reports but need to host the service internally for compliance or policy reasons, Webalo created the Mobile Dashboard Appliance. This appliance can provide up-to-the-minute information, such as sales forecasts, inventory status, staff utilization, and other key performance data, to handheld devices in virtually any location.

From a Web browser, admins can configure the delivery of pre-existing, internal reports from spreadsheets or other business applications. The Web-based interface uses a simple Q&A setup to walk administrators through the process

Webalo Mobile Dashboard Appliance

\$7,500 for up to 500 users, plus a monthly subscription fee of \$25 per user

Enables administrators to securely deliver real-time business intelligence reports to mobile decision makers

(310) 828-7335

www.webalo.com





View reports on your handheld with Webalo Mobile Dashboard.

of setting up permissions for each individual user and formats the reports automatically. The reports are generated dynamically and can retain the same look and feel of the handheld device by tailoring itself to the device's screen size.

The Mobile Dashboard Appliance is a preconfigured, 2U rackmount server with Gigabit Ethernet. It can deliver service to 500 mobile users with clusters supporting up to 10,000. In-

stallation is simple, with a Web-based interface that helps admins configure and manage the appliance. This interface is relatively easy to use and can be run by employees with basic Web and Microsoft Excel skills. Because the application is hosted internally, companies can maintain their critical information behind a firewall, rather than using an outside service.

To ensure reliability, the appliance supports scheduled backups of encrypted data over SMB (Samba) or NFS. The appliance can also be configured with automatic updates from Webalo.

Webalo Mobile Dashboard Appliance is compatible with most mobile devices, including wirelessly connected Black-Berry, Microsoft Windows Mobile, Palm Treo, and Java-enabled smartphones.

All-In-One Security

Check Point Endpoint Security Covers Firewall, NAC & More



Administrators can monitor multiple security agents with the Check Point Endpoint Security Dashboard.

MANAGING MULTIPLE AGENTS to protect data is time-consuming and expensive. Check Point is working to alleviate those problems with its Endpoint Security, which combines firewall, NAC, program control, antivirus, antispyware, data security, and remote access.

Endpoint Security incorporates many independently recognized technologies, including an industry-leading firewall; anti-malware based on ZoneAlarm; data security based on Pointsec technology; and market-leading remote access VPN.

Check Point provides a single software agent, single-management console, and single installation that can be managed by one administrator. With Endpoint Security's SmartDefense Program Advisor service, administrators can control which programs can run on PCs. To automate policy decisions and terminate malicious programs, administrators can reference a dynamic database of hundreds of thousands of known good and bad programs.

FEBRUARY 29, 2008

Check Point's firewall and NAC restrict inbound and outbound traffic to ensure systems are secure before granting access. Antivirus and antispyware components use a combination of signatures, behavior blockers, and

heuristic analysis. To protect data, the program uses full-disk encryption, access control, port management, and removable media encryption.

Check Point Endpoint Security

Check Point Endpoint Security Secure Access Edition costs as low as \$30 per endpoint for 5,000 or more endpoints

Gives administrators a central management console to access many security agents, including a firewall, program control, antivirus, data security, and more

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STORAGE FEBRUARY 29, 2008

Police Your Network

Mimosa Systems' NearPoint Add-on Options For Microsoft Exchange Server

ALTHOUGH E-DISCOVERY products let your SME comply with regulations, not all e-discovery software monitors email in real time or lets you sort through potentially relevant ESI (electronically stored information) data based on file attributes. With Mimosa Systems' Near-Point Custodian Collector Option and Content Monitoring Option, you can add powerful tools to your NearPoint for Microsoft Exchange Server.

The NearPoint Custodian monito Collector Option lets you search for, preserve, and assess ESI files from

for, preserve, and assess ESI files from file shares, laptops, and desktops. Then the software can place a forensically

Mimosa Systems NearPoint Custodian Collector Option & Content Monitoring Option

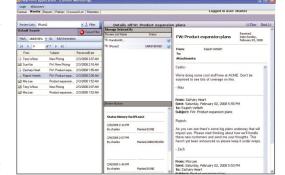
\$6 per mailbox for Custodian Collector Option; \$16 per mailbox for Content Monitoring Option

Powerful add-on options automate file management and alert you to policy violations

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You can expand the functionality of your NearPoint for Microsoft Exchange Server to include real-time email content monitoring and expedite the search and retrieval of ESI data.

defensible copy of the pertinent documents and files into NearPoint's archive. And the software can scan files based on a variety of file attributes, including document owner, modification date, and file type. The Custodian Collector Option can help your SME decrease time needed to identify relevant content for litigation.

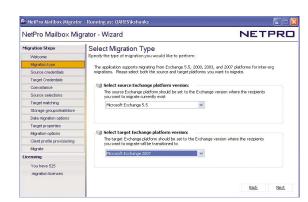
The NearPoint Content Monitoring Option lets staff use the NearPoint server to monitor email in real time for policy violations and alert management to risky behavior. The Content Monitoring Option has a policy creation wizard for configuring policies and a customizable keyword list for lexicon creation. It sends email alerts to auditors, so managers don't need to check content logs.

Messaging & Telephony

FEBRUARY 29, 2008

Exchange Management

NetPro Creates Comprehensive Suite For Exchange



With NetPro's NetMigrate, migration is a transparent, detailed, and streamlined process.

MICROSOFT EXCHANGE SERVER 2007 is a powerful tool for managing servers, offering a wide variety of possibilities within the business-critical Exchange environment. To meet the need for comprehensive software and services to take advantage of all the possibilities, NetPro Computing has a battery of new products. NetPro has released the first two of a suite of products: NetControl for Exchange and NetMigrate for Exchange.

NetControl is designed to simplify the management of email, producing email usage and storage reports so administrators can justify adding personnel and hardware upgrades. The reports also facilitate capacity and migration planning. NetControl helps administrators control data, eliminate duplicate messages, and archive folders and mailboxes

to increase Exchange performance. Restoring email content is also faster with NetControl: The program is designed to eliminate the need to dig through backups for a single email message.

Migration is generally a difficult and sensitive process. NetMigrate for Exchange is designed so that even the smallest email de-

tails, such as calendars and appointments, are accounted for. Migration is transparent, so there is no need for agents, schema extensions, or SQL databases, and production never has to cease. Administrators can also take advantage of NetPro Migration Services for expert assistance in deploying the software.

NetPro NetControl & NetMigrate for Exchange

NetControl: \$6 per seat; NetMigrate: \$18 per seat Maintenance for each product is an additional 20% of its purchase price

NetControl helps administrators manage email, while NetMigrate makes data migration a detailed yet efficient process

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NEWS



Proxy Fight

MICROSOFT IS TAKING STEPS to wage a proxy fight to replace Yahoo!'s board of directors, according to an article in The New York Times. After Yahoo! rejected Microsoft's initial bid of \$44.6 billion, the company said it would be willing to take such a drastic move to ensure the acquisition. According to unnamed sources in the article, the proxy fight will cost Microsoft between \$20 million and \$30 million. In related news, Yahoo! has announced a severance package designed to protect employees should a takeover occur. Under the plan, employees will receive a certain amount of pay and benefits if they decide to leave or are laid off or terminated without cause for two years after the takeover.

HP Reports Profit Growth In Q1

FIRST-QUARTER PROFITS REPORTED by HP, which were up 38%, beat analysts' projections. According to the company's report, it made \$2.13 billion, or 80 cents per share, for the quarter that ended last month. Last year during the same period, HP reported a net income of \$1.55 billion, or 55 cents per share. Revenue during Q1 was \$28.5 billion, which is a 13% increase over the same period a year earlier. For the 2008 fiscal year, HP has forecast earnings of between \$113.5 billion and \$114 billion, with earnings per share of between \$3.50 and \$3.54. Analyst predictions for the same period are earnings of \$3.36 per share.

Microsoft Extends Server 2008 Eval Period

WATCH THE

MICROSOFT SAYS IT WILL NOW allow enterprises to evaluate Windows Server 2008 for up to 240 days before they're required to purchase or activate the product. According to the company, users can install any version of Server 2008 without activating the product for 60 days; that 60-day evaluation period can now be renewed up to three times. Microsoft issued a document with instructions on how to extend the evaluation period at support.microsoft.com/kb /948472. One caution: The evaluation period can never be extended beyond 60 days, so Microsoft advises users maximize their evaluation timeframe by waiting until the current 60-day evaluation period is about to end before renewing.

Some On Yahoo! Board Voice Concerns

YAHOO! CHAIRMAN ROY BOSTOCK, other members of the company's board of directors, and investor Ron Burkle are reportedly voicing their concerns over rejecting Microsoft's \$44.6 billion takeover of Yahoo!. The news was reported in the *New* York Post and cites an unnamed source as saying that Yahoo! CEO Jerry Yang "would rather do anything but sell to Microsoft." According to the article, Bostock is concerned that the board is acting out of emotion rather than fiduciary duty to shareholders. Yahoo! rejected Microsoft's offer, saying it substantially undervalued the company.

ID Theft, Losses Down

THE NUMBER OF INDIVIDUALS who said they were victims of identity theft dropped to 8.1 million in 2007, compared to 8.4 million in 2006, according to the latest figures from Javelin Strategy & Research. That's about 3.58% of the adult U.S. population. Javelin reports that residents of California and Illinois are among those most at risk and that the telephone is increasingly being used to commit fraud. In 2007, consumers lost about \$45 billion because of identity theft. Consumers spent an average of \$691 to clear up the fraud. Javelin credits the drop in the number of victims to greater awareness by both consumers and businesses that store personal data on consumers.

■ HP Pretexting Cases Settled

HP HAS SETTLED CASES with The New York Times and three journalists from BusinessWeek who charged that HP spied on them. In 2006, in an attempt to pinpoint who was leaking internal information to the press, HP hired investigators. Those investigators obtained Times and BusinessWeek reporters' phone records fraudulently by using pretexting methods. The scandal resulted in HP's chairman, a board member, and HP's general counsel stepping down from their positions. With these settlements, HP says it is glad to put the incident behind it. The specific financial amounts were not disclosed; the Times' attorney said it will donate its settlement money to charity.

New Net Neutrality Bill Introduced

A BIPARTISAN BILL RECENTLY introduced would ban broadband Internet providers from blocking or otherwise impairing

This information provides a quick glimpse of current and historical stock

Company	Symbol	Year Ago	Feb. 13 \$	Feb. 20 \$	% change from previous week
BEA Systems	BEAS	\$11.93	\$18.82	\$18.83	▲ 0.05%
Computer Associates	CA	\$26.80	\$24.75	\$23.47	▼ 5.17%
Cisco Systems	CSCO	\$27.24	\$24.06	\$23.20	▼ 3.57%
Dell	DELL	\$23.80	\$20.31	\$19.75	▼ 2.76%
Electronic Data Systems	EDS	\$29.13	\$18.47	\$18.45	▼ 0.11%
Google	GOOG	\$464.93	\$534.62	\$509	▼ 4.79%
HP	HPQ	\$40.29	\$44.05	\$47.44	▲ 7.7%
IBM	IBM	\$96.91	\$108.42	\$107.85	▼ 0.53%
Intel	INTC	\$20.85	\$21.21	\$20.38	▼ 3.91%
McAfee	MFE	\$31.69	\$34.50	\$33.39	▼ 3.22%
Microsoft	MSFT	\$29.07	\$28.96	\$28.22	▼ 2.56%
Oracle	ORCL	\$16.82	\$19.66	\$19.43	▼ 1.17%
Red Hat Software	RHT	\$23.79	\$18.61	\$18.08	▼ 2.85%
Sun Microsystems	JAVAD	\$6.27	\$17.39	\$17.32	▼ 0.4%
Symantec	SYMC	\$17.36	\$18.13	\$17.88	▼ 1.38%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions

content from competitors. The legislation, introduced by Reps. Ed Markey (D-Mass.) and Chip Pickering (R-Miss.), states that it is the policy of the United States to "guard against unreasonable discriminatory favoritism for, or degradation of, content by network operators based upon its source, ownership, or destination on the Internet." In addition, the bill would require the U.S. Federal Communications Commission to investigate possible violations of its August 2005 policy regarding the blocking of Web content by providers.

SCO May Get Bankruptcy Bailout

AS PART OF A REORGANIZATION plan last year, The SCO Group filed for Chapter 11 bankruptcy protection in September. But the company may have found another way out through a \$100 million investment that would lead to the company going private. According to a recent announcement, SCO reported that Stephen Norris & Co. Capital Partners, aka SNCP, and partners in the Middle East have agreed to finance the company's reorganization efforts. Before moving forward, however, the deal will first need to be approved by a U.S. Bankruptcy Court judge in Delaware.

Microsoft Makes Executive Changes

MICROSOFT ANNOUNCED CHANGES in management with seven new senior vice presidents and seven new corporate vice presidents. One notable change is the appointment of Andy Lees to senior vice president for mobile communications operations. Microsoft also said Steve Berkowitz, who had been CEO of Ask-Jeeves.com before joining Microsoft in April 2006, will no longer be senior vice president of the Online Services group. Three executives will take over online operations: Satya Nadella, senior vice president of the search, portals, and advertising group; Brian McAndrews, senior vice president of the advertiser and publisher solutions group; and Bill Veghte, senior vice president for online services and Windows.

Dell Revamps Its Support Services

AS DELL CONTINUES to fight declining growth in its sales of PCs and servers, it will overhaul its current support services with two new programs. Dell ProSupport for IT, one of the services, will let IT staff at customer sites bypass Dell's usual support escalation process and have direct access to the appropriate support personnel. Dell ProSupport for End-Users, on the other hand, will allow non-IT end users to access relevant configuration and application assistance for their PCs. Both programs aim to improve support service turnaround times and give the opportunity to fast-track requests directly to the right support staff.

IBM Report: Blended Security Threats Increasing

ACCORDING TO IBM's security trends report for 2007, the number of malware code samples increased 30% last year, totaling 410,000. Trojans accounted for the largest category of malware, with 26%, and IBM says cyber criminals are using more sophisticated blended threats instead of mass-mailing worms. The number of software vulnerabilities fell 5.4% in 2007, but occurrences of "high-impact" vulnerabilities, which are the most risky because they grant immediate access, grew 16.2%. The report says five companies—Microsoft, Apple, IBM, Cisco, and Oracle—accounted for 13.6% of the vulnerabilities disclosed, but, for some reason, they did not patch 20% of those flaws.

Upcoming IT Events

- MARCH -

Gartner Wireless & Mobile Summit March 3-5

Chicago, III. www.gartner.com/it/summits /ra11/index.jsp

. Secure IT Conference

March 4-6 San Diego, Calif. www.secureitconf.com

Cornerstones Of Trust 2008

March 6 Foster City, Calif. www.cornerstonesoftrust.com

Help Desk Institute Conference

March 9-12 Dallas, Texas www.thinkhdi.com/hdi2008 VoiceCon March 17-20

Orlando, Fla.

www.voicecon.com

Boston SecureWorld Expo March 26-27 Boston, Mass. www.secureworldexpo.com

Data Center World

March 30-April 3 Las Vegas, Nev. www.afcom.com

- APRIL -

FOSE April 1-3 Washington, D.C. www.fose.com

Gartner Business Intelligence Summit

April 1-3 Chicago, III. www.gartner.com/it/summits /bi6/index.jsp

RSA Conference

April 7-11 San Francisco, Calif. www.rsaconference.com /2008/US/home.aspx

ASCDI Spring

April 9-12 Key West, Fla. www.ascdi.com

ITEC Miami April 16-17

Miami, Fla. www.goitec.com

Houston SecureWorld Expo April 23-24

Houston, Texas www.secureworldexpo.com

Interop Las Vegas

April 27-May 2 Las Vegas, Nev. www.interop.com

Atlanta SecureWorld Expo

April 29-30 Atlanta, Ga. www.secureworldexpo.com

- MAY -**ITEC Houston**

May 7-8 Houston, Texas www.goitec.com ITEC Long Beach May 14-15 Long Beach, Calif.

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PRODUCTS AT WORK

NAS Gateways Provide Flexibility & Ease Of Management

Health Insurance Analysis Firm Turns To ONStor's Bobcat NAS Gateway

by Sue Hildreth

WHAT A CHANGE A FEW TERABYTES can make in your storage strategy.

A year ago, Consortium Health Plans, aka CHP, was quite happy with its simple DAS (direct-attached storage) system. Composed of Dell PowerVault 220 SCSI arrays (www.dell.com) serving two Oracle servers with 10 databases, the system was fairly easy to manage and simple for the IT staff to understand.

Consortium, a coalition of 19 Blue Cross Blue Shield health insurance providers, provides information and analysis to corporate insurance consultants and national insurance brokers. Because CHP is a small, centralized firm that deals mainly with data and text in either Oracle (www.oracle.com) or Microsoft (www.microsoft.com) formats, it has fairly straightforward storage needs. There are no 3D models or large image files to store, for example, and none of the data or applications is in remote branch offices. The Consortium's 45 employees access the data via the server applications, and the attached SCSI arrays were ample enough to handle the total 2.4TB of stored data.

That all changed in early 2007, when the Consortium's IT staff was told to be ready to receive another database, this one with a whopping 6TB of data. The various DAS solutions that Consortium's IT staff considered were all inadequate to handle the large increase in data

For starters, they couldn't identify any affordable DAS unit capable of scaling to 6TB.

"In the class of servers that we typically buy, we didn't find any that had that much storage directly attached to it," says Marcliff Fountaine, technology coordinator for CHP

Therefore, to support the new database, Consortium would have needed to purchase another SCSI array and daisy-chain the storage units. In that case, each DAS unit would be dependent on the others, so any failure in the chain would result in downtime for all of the DAS storage. Alternatively, the company could add more DAS units to a single server in a hub-and-spoke model, but that

would increase the management overhead because each storage device would have to be managed independently, says Fountaine.

So Fountaine spent several months looking at NAS and SAN products. While he considered a SAN, he felt it was too sophisticated for his needs. Ultimately, he decided on the ONStor Bobcat Series NAS Gateway (www.onstor.com).

"We're a small company, so we wanted something cost-effective for us. We also wanted something that was easy to implement and maintain. Installing a full-blown SAN would, we felt, require too much of a learning curve in a short time frame. NAS seemed to be the easier solution for us," explains Fountaine.



The ONStor NAS gateway is different from a traditional NAS device attached to the network. A gateway acts as a front-end "file server" to a collection of storage disk arrays behind the gateway. End users and applications don't see the back-end storage hardware but deal only with a single storage interface. A gateway also has the benefit of reducing downtime during upgrades. With a gateway, there isn't a need to reconfigure client computers to recognize a new disk or storage device on the network. Instead, the gateway recognizes the new device, and clients continue to deal with the gateway not with the individual storage devices. A gateway essentially decouples processing and file-serving from the storage hardware.

Virtual Servers Spread The Load

The ONStor NAS gateway also supports virtualized storage and can provide up to 40TB of virtualized storage on as many as 255 virtual servers, all of which appear to the client computers as file servers. A virtual server appears as a complete NAS device, with its own unique identity and IP address.

The gateway's support of virtual storage will enable CHP to consolidate some of its

file servers onto ONStor virtual servers, thus relieving the overloaded file servers, improving performance, and making overall storage management easier.

"It's helping us to alleviate the load placed on some of our fullest file servers," says Fountaine.

Because many virtual servers can exist on one NAS gateway, it's possible to balance the workload between them. Likewise, virtual servers can be moved around within a cluster of several gateways to balance the workload on the hardware. If a storage device requires maintenance, all of the virtual servers can be relocated to other devices so users can continue to work.

Virtual servers are created and configured via either a command-line interface or through the NAS Gateway Manager GUI. The NAS Gateway Manager is a Windows application that provides a single point of management for multiple NAS Gateways.

Besides the NAS Gateway Manager, the ONStor gateway also has a 64-bit file system, STOR-FS, which scales to 40PB. It also comes with four applications that extend the multidevice capabilities of the ONStor NAS system: ONStor High Availability, which ensures continuous system availability by managing switchover scenarios among multiple filer nodes; ONStor Mirror, which delivers asynchronous data replication between multivendor storage arrays, ensuring business continuance through instant data restore; ONStor NAS Cluster Manager, which is a GUI that provides single-pane-of-glass management for multiple filer nodes; and ONStor Data Restore, which provides quick recovery by reverting selected file systems to an earlier

Interoperability & Expandability Key Features

The Bobcat gateway is interoperable with disk arrays from many vendors, including HP (www.hp.com), IBM (www.ibm.com), EMC (www.emc.com), and Hitachi Data Systems (www.hds.com). Likewise, its STOR-FS filing system supports multiple protocols—Windows, Linux, Unix, and Macintosh—as well as Active Directory and NFS. That support for different platforms was an important factor, notes Fountaine.

"We wanted something that was easy to integrate into our environment and which

works with common protocols," he says. "Our Oracle databases run on Linux file servers, so we needed compatibility."

It took Consortium Health three days to implement the ONStor Bobcat Gateway, with help from a third-party reseller, and another three weeks to load the new data onto the disks and tune the database.

Consortium's NAS Gateway is currently configured with 21TB of storage behind it. It supports 6TB of Oracle data files on high-performance/high-capacity SAS disks and 6TB of backup data and file sharing on SATA disks. It also holds 9TB of common file storage, as well as files that are being moved as the existing DAS servers are retired from production.

If CHP does find itself needing more room, it can expand without having to schedule downtime. Additional disk arrays can be added and configured via the storage management console without taking any of the existing units offline. Because all of the NAS gateways are physically connected to the main "pool" of storage, capacity can be added at any time by just adding another disk.

When it comes to storage, being able to expand capacity quickly and easily is always a useful feature. "We think with 21TB, we'll be set for a couple of years, but it depends on the projects that come up," says Fountaine. "As with anything, your over-sizing can suddenly disappear in a couple of weeks."

ONStor Bobcat 2200 Series NAS Gateway

NAS gateway that provides a central point of management for multiple and disparate storage devices attached to the network

"Installing a full-blown SAN would, we felt, require too much of a learning curve in a short time frame. NAS seemed to be the easier solution for us," explains Marcliff Fountaine, technology coordinator for Consortium Health Plans.

(877) 266-7867 www.onstor.com

SECURITY FEBRUARY 29, 2008

Protected Web Apps

nCircle's WebApp360 Stops Security Leaks

EVERY COMPANY KNOWS that protecting the information of its customers is vital. But putting that protection into place and making sure it works is no mean feat. But thanks to the nCircle Network Security WebApp360, an add-on for nCircle's appliance-based IP360 offering, users can rest assured that their enterprise Web applications and any supporting infrastructure components are being scanned like clockwork.

WebApp360 is a comprehensive risk assessment tool that hunts down weaknesses found in Web applications, supporting Web servers, OSes, services, protocols, the network infrastructure, and adjacent software systems. When any aspect of the system involved in supporting Web applications gets updated or upgraded, undergoes a code change, or experiences a failure, WebApp-360 will let you know so you can take the steps necessary to prevent a breach.

Furthermore, as a software component of nCircle's appliance-based offerings, Web-App360 doesn't require any significant deployment or maintenance costs.

WebApp360's interface delivers a comprehensive view of the state of the network. On the Host Details screen, users can browse the Scan History and view the vulnerabilities in a column on the left side and the Web applications on the right. WebApp360 detects and blocks dozens of potential attacks, including Cross-Site Scripting, basic SQL injection, HTML tag insertion, URL insertion, invalid input, plain-text password submission, and password field AutoComplete attacks.

WebApp360's features include continuous real-time Web application assessments,

security risk analysis, a scalable architecture that supports up to an unlimited number of users, normalized risk scoring, extensive reporting capabilities via the IP360 appliance, and instant install on the IP360 appliance.

nCircle WebApp360

Sold as an add-on to nCircle IP360; perpetual pricing starts at \$25,000

Web application risk analysis module that detects vulnerabilities in Web apps

(888) 464-2900

www.ncircle.com



STORAGE FEBRUARY 29, 2008

Archive The Easy Way

QStar's Latest SntryStr Appliance Lends A Hand

FINDING STORAGE data management tools that conform to your SME's specific needs can be costly and frustrating. But QStar Technologies' second-generation SntryStr Archive Appliance is capable of handling a variety of applications to address almost any organization's data retention and archiving requirements.

The SntryStr features support for QStar's SntryPACS and SntryML apps, which let SMEs engage in medical image archiving

and email archiving. QStar's platform is built around the Linux kernel and employs embedded data management software to manage connections to CAS devices, tape media, and optical sources.

The SntryStr lets users build around the unit's open architecture with support for SATA hard drives and the removable media. QStar offers two variants: the 1U rack-mountable QSS 2000 with 500GB, 750GB, or 1TB of mirrored data protection

and the 2U rack-mountable QSS 6000 with up to 6TB of RAID-5 data protection. Users can also upgrade the QSS 2000 with up to three more storage expansion units that each support 15 hot-swappable drives. The QSS 6000 supports up to six more storage expansion units for up to 96TB of archive data.

Either model can be configured with one or two dual-core Intel Xeon processors and up to 4GB DDR RAM. Other features in-

clude an integrated ATI ES1000 controller with 16MB of dedicated SDRAM, a CD-RW/DVD drive, a dual-port auto-sensing gigabit NIC, automatic IP address assignment, iSCSI support, and a Fibre card.

QStar Generation-2 SntryStr Archive Appliance

Starts at \$6,300, which includes 500GB of storage and support for 3TB of near-line tape or optical archiving

Updated rack-mountable archiving appliances ease management of regulated data

(850) 243-0900

www.qstar.com



FEBRUARY 22, 2008

NETWORKING & VPN

Boost Web Application

Performance



A10 Networks' AX Series Next-Generation
Server Load Balancer Provides Industry's Best Price/Performance

THE AX SERIES Advanced Traffic Manager family from A10 Networks provides a reliable, cost-effective platform that boosts Web application performance for organizations of all sizes. A10's AX Series is the industry's best price/performance next-generation server load balancer, including a suite of advanced applica-

tion delivery features without additional licensing fees.

The AX's ACOS (Advanced Core Operating System) architecture is revolutionary by market standards because of its optimized multi-CPU architecture that is designed to handle today's bandwidth-intensive network environments.

The end result is a switch with uncompromised performance even when all features are

turned on. Benefits include increased application performance, availability, and reliability, as well as an improved Web experience for customers and end users. With its 2U form factor, the AX Series also helps organiza-

tions reduce data center power, server, and rack space requirements.

All AX models feature carrier-grade hardware, the industry's best SSL (secure socket layer) and Layer 4-7 load balancing price/performance, support for IPv4 and IPv6, and an industry-standard command-line interface and easy-to-use GUI. They also include high-performance secure email and antispam features and load balancing for multimedia applications such as SIP.

NETWORKING & VPN

A10 Networks AX Series

The AX Series is the industry's best price/performance next-generation server load balancer (888) 210-6363

www.a10networks.com

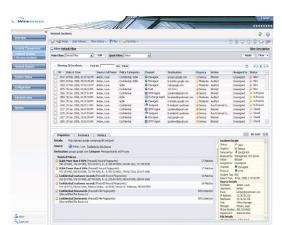
FEBRUARY 8, 2008



SECURITY FEBRUARY 29, 2008

Help Prevent Data Loss

Websense Data Discover Software Manages Information Flow



Websense Data Discover monitors and tracks information movement through network reporting and incident management.

MONITORING THE MOVEMENT of sensitive data is paramount to maintaining confidence in the security of business information. Organizations should take steps toward securing a data loss prevention program. Websense provides such a tool for developing a safeguard system in its Websense Data Discover software.

As a standalone program, Websense Data Discover supports search options for high volumes of confidential information, identifying and classifying corporate files to ensure the protection of data in motion and data at rest. Information stored on file servers, desktops, notebooks, and portable drives requires detailed categorization and location recognition. Data Discover uses language processing and Websense's

advanced fingerprinting technology, PreciseID, to identify these specific forms of data, finding both unstructured and structured data.

With Data Discover, confidential information can be easily found within an organization without sacrificing the capabilities of business processes, letting IT enable safeguard policies and reduce the risk of data loss.

The features found in Data Discover are also in Websense Data Security Suite 6.5 as part of the suite's network

awareness procedures. With Data Security Suite, users can configure and map the movement of data with a collection of more than 450 templates. To reinforce data loss prevention, the Data Security package audits the transfer of information to assess workflow risks.

Websense Data Discover

Starts at \$8,750 based on the number of users; one- to three-year subscriptions available

Comprehensive data protection tool suited for managing information in growing organizations

(800) 723-1166

www.websense.com



Neverfail Protects

VMware Infrastructure

Monitor & Clone Your VMware VirtualCenter Server



Neverfail for VMware VirtualCenter duplicates your VMware VirtualCenter server and proactively monitors server health.

TO HELP ENSURE IT STAFF won't lose key VMware VirtualCenter services, Neverfail for VMware VirtualCenter clones and continuously replicates the VMware VirtualCenter server's configuration settings, data, and SQL Server databases onto a secondary server.

If any major issues arise with either the VMware VirtualCenter server or connected hardware, the Neverfail software automatically fails over VMware VirtualCenter to the secondary server with the cloned VMware VirtualCenter data. Neverfail also maintains connectivity to the primary server until the outage can be resolved, so IT admins can continue to use the VirtualCenter management features with up-to-date data.

Neverfail for VMware Virtual-Center checks the health of the management server software, the hardware for the Virtual-Center server and associated components (such as License Server), the network infrastructure, and the OS. In some cases, the software may simply alert IT staff to a problem, while more serious issues cause automatic failover. If Neverfail switches to the secondary server, IT staff can continue to use the features

of the VMware VirtualCenter without problems, so end users won't lose access to apps and IT staff won't lose VirtualCenter's management or control operations.

Neverfail For VMware VirtualCenter

Starts at \$10,000 per pair of servers

Software that monitors and clones the VMware VirtualCenter server to ensure IT staff can use the management and control tools of the VMware VirtualCenter

(512) 327-5777

www.neverfailgroup.com



NETWORKING & VPN

FEBRUARY 8, 2008

Messaging & Telephony

FEBRUARY 15, 2008

Network Monitoring With SolarWinds

ipMonitor v9.0 Features SmartMonitor Technology

WHEN A PRODUCT COMES ALONG that automates common tasks and makes monitoring critical systems easier, IT takes notice. That's the case with SolarWinds' ipMonitor network, server, and application monitoring system.

The ipMonitor Web-based utility features an easy-to-use graphical interface and concise dashboard views that deliver insight into the health of the network and application infrastructure.

The software comes with more than 50 built-in monitors for reporting on routers, switches, and servers. Built-in app monitors include Active Directory, DNS, Microsoft Exchange, FTP, Web, IMAP, and SMTP.

Other capabilities include rapid discovery of IP-based network devices, the

SolarWinds ipMonitor v9.0

Starts at \$1,495

Monitors your network, server, and applications

(866) 530-8100

www.solarwinds.com





The Dashboard tab lets ipMonitor 9.0 users get a snapshot of resource utilization and network performance.

ability to group devices logically and dynamically, a network mapping capability that tracks data and lets users take corrective actions in the event of a failure, and automated recovery and remediation functions. Once a device is discovered, users can look up the device's attributes, query a server or device for a list of appropriate monitors that work with it, and manually add new monitors.

The ipMonitor v9.0's SmartMonitor capability recommends the best and most appropriate settings for analyzing the organization's specific application and network infrastructure, eliminating the task of manually selecting and tuning the monitors. Admins can also roll out ipMonitor v9.0 without an agent.

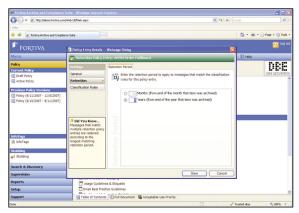
Fortiva's SmartStore Helps You Meet FRCP Requirements

Email Archiving

FORTIVA SMARTSTORE ARCHIVE helps you meet the demands of the Federal Rules of Civil Procedure without adding additional infrastructure or IT staff. This SaaS (software as a service) package gives you the ability to archive all email in a central location, enforce policies and litigation holds, perform enterprise searches, and conduct early case assessment. Perhaps best of all,

Fortiva claims that you'll get this functionality for the same or less than the cost of storing and managing the data on enterprise storage in-house. As an additional benefit, SmartStore's stubbing feature can help to reduce the demands on Exchange, thereby improving email storage management.

Because the penalties for failing to enforce a consistent retention policy or being unprepared to produce email in a timely fashion can be quite stiff, having effective search and retrieval capabilities is a top priority for many businesses. To help meet these requirements, SmartStore gives customers access to sophisticated search tools without the cost of maintaining the servers required for enterprise-grade



Fortiva SmartStore lets you customize retention policies to comply with various regulations.

search in-house. Should your company need access to real-time search for more intensive e-discovery requirements, you can upgrade SmartStore archive to the full Fortiva Archiving Suite at any time.

Fortiva SmartStore

Starts at \$1.10 per user, per month for a 1,000-user company

Gives companies the ability to archive email, comply with federal regulations, and meet discovery requests for a reasonable price

(866) 366-3668

www.fortiva.com



NETWORKING & VPN

FEBRUARY 15, 2008

Keep Tabs On Your Assets

RF Code System Tracks Rack-Level Equipment In Real Time

COMPANIES NO LONGER NEED to incur the high expenses associated with manually tracking a company's data center inventory. A new system from RF Code makes data center asset inventory nearly

automatic. Not only does this system save time and money, but it also helps companies ensure compliance with regulations.

The three products in the system—the R100

Asset Tag, R200 Active RFID Rack Reader, and Zone Manager software together create an automated inventory system that lets IT personnel perform real-time monitoring of rack-level assets. By implementing this system, a company can identify the location of any of its assets at any time.

What makes RF Code's system different than other asset-tracking systems is that it updates inventory data every few seconds. In contrast, a traditional hardware-based inventory system requires that individual items are tagged or barcoded and then scanned manually during inventory procedures. Traditional software-based inventory systems can only keep track of those servers that are plugged in and in their original locations.

The R100 Asset Tag has an industrialstrength adhesive backing to secure it to a standard U-mounted rack asset.

Once the R100 Asset Tags are mounted in a rack, they transmit signals

that are received by the R200 Active RFID Rack Reader. The rack reader then reports the data it receives to the RF Code Zone Manager software, which can show the desig-

nated zones and the RFID tags in each zone. If a data center asset is installed or removed, or if its location changes, Zone Manager immediately alerts staff.



Consists of three parts: R100 Active RFID Tags (\$18.50 per tag), R200 Rack Reader (\$995), and Zone Manager Software (price based on number of racks and tagged servers)

Uses software, asset tags, and an RFID reader to automatically track rack-level items for up-to-date inventory of data center assets

(877) 969-2828

www.rfcode.com



NETWORKING & VPN

FEBRUARY 15, 2008

An Intelligent Switch

ConSentry LANShield Features Programmable Hardware, **Deep Packet Inspection Processor**

SWITCHES BASED ON legacy architecture may provide the speed your network needs, but because legacy switches typically use architecture that relies on IP addresses, Layer 3/4 ports, virtual LANs, and access control lists, your IT staff must create and maintain a number of local security policies. ConSentry's Intelligent Switching architecture lets switches reference central directory stores, such as Active Directory, to control authentication and user management and track activity based on user and application roles.

ConSentry's LANShield Switch provides a platform to implement the Intelligent Switching architecture. LANShield features application-based QoS at Layer 7; greater control of Web-based application and instant messaging; and LAN visibility

ConSentry LANShield Switch

Starts at \$6,995; LANShield OS available as a free upgrade to ConSentry customers with current support contract

Uses ConSentry's Intelligent Switch architecture to provide integrated user authentication and wirespeed switching on your network

(408) 956-2100

www.consentry.com





by user, role, server, and file. The LAN-Shield Switch can protect against MAC spoofing and avoid static IP address mapping of Web destinations. The LAN-Shield's embedded application visibility lets it recognize a number of types of data, including file names, Web addresses, and FTP file transfers. The dynamic control of both users and applications helps you roll out LAN services and optimize application performance over the network without reducing network security.

What makes the Intelligent Switch architecture different from legacy switches? For starters, Intelligent Switch hardware is programmable, so you can tell the switch to utilize role-based policies, such as for certified users or specific groups of users, to alleviate the need for IT staff to create and maintain virtual LANs and access control lists. The Intelligent Switch architecture also includes a deep packet inspection processor that can identify applications at Layer 7, rather than just by port number. For each traffic flow, the LANShield Switch identifies the application in use, applies policies based on role, and tracks all activities.

STORAGE FEBRUARY 15, 2008 NETWORKING & VPN

Scalable Online Backup

MozyEnterprise Offers Seamless Integration Into Existing Infrastructure



The Dashboard view provides a simplified yet informative snapshot of the backup.

EMC's NEW MozyEnterprise, an automated offsite backup service for desktops, laptops, and remote Windows servers, is based on Berkeley Data Systems' Mozy-Home and MozyPro backup solutions, designed for consumers and small businesses. Users can purchase, deploy, manage, and meter MozyEnterprise through the EMC Fortress SaaS delivery platform.

EMC MozyEnterprise

\$5.25 per month per desktop or laptop plus 70 cents per month per gigabyte; \$9.25 per month per Windows server plus \$2.35 per month per gigabyte

Automates online backup and recovery for desktops, notebooks, and Windows servers

(866) 464-7381

www.emc.com

NETWORKING & VPN



MozyEnterprise features a strippeddown interface that makes configuring backups and schedules simple. The service comes with preconfigured backup sets that snag and save the most common file types. Advanced users can take the reins and edit the backup sets. The offering also lets users choose how to perform restores.

MozyEnterprise's security features include 448-bit Blowfish and 128-bit SSL data encryption during file storage and transfers, user-configurable private encryption key options, and near continuous data protection with backups of new and changed files every two hours. EMC also equipped it with RSA's secure access management and management features.

MozyEnterprise's data backups are locked tightly, with constant onsite monitoring and protective systems that keep your valuable data safe from damage by fire, power outages, and even earthquakes.

FEBRUARY 22, 2008

Virtualize Your OS

Parallels Virtuozzo Containers 4.0 Partitions Server OSes



You can create dozens to hundreds of containers on each standard physical server.

FEBRUARY 22, 2008

physical hardware node without reducing performance. With Parallels Virtuozzo Containers 4.0's granular resource controls, you can make real-time adjustments to hardware resources. Version 4.0 improves the

Virtuozzo file system to more effectively use hard drive resources.

Another advantage is the ability to deploy patches and upgrades to all containers and across servers and reduce management time with OS sprawl. To drive uptime, it includes support for high-availability configurations, including clustering in Windows Server 2003 and Red Hat Enterprise Linux, as well as Microsoft Network Load Balancing. The software supports real-time backup from Linux and Windows and features a complete and automated backup scheduler.

Parallels Virtuozzo features a Transporter tool to let you select and migrate resources from a physical or Virtual Machine Monitor server to a container. 4.0 introduces the Parallels Infrastructure Manager, which lets IT admins manage the infrastructure via dashboards.

to create a secure, controlled, and managed environment. Parallels Virtuozzo Containers creates isolated containers of a single physical server and OS instance, which allows IT managers to consolidate performance-sensitive workloads and increase the virtual servers on each

VIRTUALIZED SERVERS allow SMEs to

centralize desktop applications and OSes

Parallels Virtuozzo Containers 4.0

\$3,000 per dual CPU

Separates a server OS into independent virtual partitions, which helps increase memory efficiency and avoid virtualization performance bottlenecks

(703) 815-5670

www.parallels.com



NETWORKING & VPN FEBRUARY 22, 2008

Consolidate IT Management

LANDesk Management Suite 8.8 Provides Easy Migration, Automation



LANDESK MANAGEMENT SUITE from Avocent puts all IT management tasks into one console. This saves IT a great deal of time when managing security, compliance, and various other system management tasks. The Management Suite also enables automation of certain tasks.

The software can be used to manage multiple locations and is designed for easy migration, simplifying the transfer of users and their profiles to new operating systems. It works across heterogeneous networks and can be used anywhere at any time, enabling users to work with every device in a complex network. In general, the software suite is designed for easy security and management of networks in an enterprise environment.

LANDesk Management Suite v8.8 adds to the foundation already established by earlier versions of the software suite. Setup and some regular tasks are now wizard-based for greater ease of use. With version 8.8, LANDesk users can now remotely manage devices, including Windows Vista machines, from a Mac console.

Software license monitoring and distribution has improved: Managers now have custom access to software packages according to group. Software is automatically installed and removed based on manager-preset access permissions. Extensive platform support lets IT managers keep track of the variety of devices that populate a complex network environment.

Other features of LANDesk Management Suite 8.8 include Intel vPro support, a local scheduler, more than 100 provisioning templates for optimal hardware configurations, and robust alerts.

Advanced Auditing Tools

Ecora Auditor Professional 4.5 Offers Improved Performance



Ecora's Auditor Professional 4.5 includes a dashboard that clearly displays systems' level of compliance.

TODAY'S SECURITY demands and compliance requirements make it more important than ever for a company to have a system in place to monitor data center activity and configurations. Ecora Software's Auditor Professional 4.5 can help companies ensure that their data centers meet both.

Version 4.5 provides auditing and analytics tools to help IT managers adapt data centers and achieve the best configurations. Auditor Professional also improves security and performance by implementing closed-loop change validation and

Ecora Auditor Professional 4.5

Software that monitors configuration changes for better security and compliance

(877) 923-2672

www.ecora.com



alerting staff when authorized and unauthorized changes occur.

Auditor Professional provides compliance data for security and compliance professionals. Its dashboards can be customized to provide exactly the type of info a user needs. Ecora has also made improvements to the readability, content, and appearance of the software-generated reports. Version 4.5 not only helps companies comply with standards and regula-

tions but helps reduce downtime and improve security.

Users may choose to collect data agentlessly, use agents on select systems, or combine both methods. This lets the software provide audit data, even for systems in a DMZ. Ecora Auditor Professional detects systems using several methods, including IP discovery and Active Directory. It collects not only OS security and configuration data but also that of databases, applications, firewalls, and network devices.

Auditor Professional 4.5 is also compatible with BMC Remedy 6 and HP Service Desk 4.5 and now supports Cisco ASA, Z-Linux, Centos, and Oracle Enterprise Linux, as well as the 18 platforms already supported. Pricing for Auditor Professional varies depending on the unique hardware and configuration of the client environment.

LANDesk Management Suite 8.8

\$92

IT management software that puts control of a variety of management tasks onto a single console, saving money for the company and time for IT professionals

(800) 982-2130

www.landesk.com



Unified Communications Packages For The SME

Vendors Roll Out Tools Combining Phone, IM, Email & Collaboration

by Drew Robb

ONCE UPON A TIME, you had a phone system and snail mail—then came fax, cell phones, email, videoconferencing, instant messaging, Web conferencing, and VoIP. All of a sudden, the communications picture gets extremely complex. The vendor community has responded with the advent of unified communications, or UC, packages that attempt to bring all these functions under centralized control. And now they are reaching into the SME space with new offerings.

While each vendor says it has a complete offering, it is important to pay attention to the fine details. One group of products tends to be strong on the telephony side, focusing on PBX and VoIP; others are more software-driven (or network-driven, in the case of Cisco) and focus on the IM, email, and collaboration components.

"UC as a complete set of functions is not available from anybody," says Bern Elliot, an analyst at Gartner. "UC has different interpretations, so each vendor tends to accentuate the positives of their own solutions."

He gives a few examples. Avaya's MultiVantage Express (www.avaya.com) and Nortel CallPilot Mini (www.nortel .com), for example, come from the telephony side and are rolling out products that

integrate with messaging/collaboration tools from Microsoft (www .microsoft.com) and IBM (www.ibm.com), which focus on the email and collaboration software side. Interactive Intelligence (www.inin.com), on the other hand, has an IP PBX product called Vonexus EIC (Enterprise Interaction Center) that supports many of the UC functions. It is bundled with another product that includes a more com-

plete set of telephony integration features. This is one of the more integrated toolsets, according to Elliot. He also says that Cisco (www.cisco.com) is working on tight integration but isn't quite there yet. But its product spans all unified communications functions with one exception—email. There, it partners with others. And what about Microsoft? It has Office Communications Server 2007, which offers many UC functions as well as an internal VoIP solution. But it needs a gateway to external PBXes.



What product is right for you? It's a case of looking at each candidate to see how good a fit it is. In many cases, the choice of UC vendor is based on leveraging the infrastructure elements you have in place. For example, if you have a Nortel IP PBX that is relatively modern and functioning well, it is probably best to build the system around it.

IBM Lotus Sametime

IBM Lotus Sametime Standard provides SMEs with instant messaging; federation with public IM networks such as AOL,

Yahoo!, and Google; integrated VoIP; point-to-point video; support for mobile clients; and Web conferencing. It supports Windows, Mac, and Linux clients, as well as server operating systems including Windows, Linux, and IBM System i. IBM is also partnering with the leading providers of telephony, audio, and video capabilities to offer businesses an integrated front-end UC client that can work with

whichever back-end infrastructure they may already have. For companies looking to just get started with the core enterprise IM capabilities, Lotus Sametime Entry offers encrypted IM with a user-friendly design as well as integration into email and office productivity suites.

"The goal is to allow SMEs to work with the technology they may already have or be most comfortable with and that can return the lowest possible

TCO for their specific environment," says Adam Gartenberg, offering manager for IBM UC and collaboration software. "We have doctors' offices that are using Lotus Sametime in place of an intercom and PA system and other small companies that are presence-enabling their Web sites."

Microsoft Office Communications Server 2007

Microsoft Office Communications Server 2007, aka OCS, is very much from the software side of the street. It delivers VoIP, video, IM, conferencing, and presence capabilities. For those already using Microsoft Office, Exchange, Dynamics ERP, and/or CRM, the good news is that OCS integrates very well with these applications. To make up for its lack of telephony expertise, Microsoft is doing a good job in partnering with the likes of Nortel, Avaya, and others.

Interactive Intelligence Vonexus

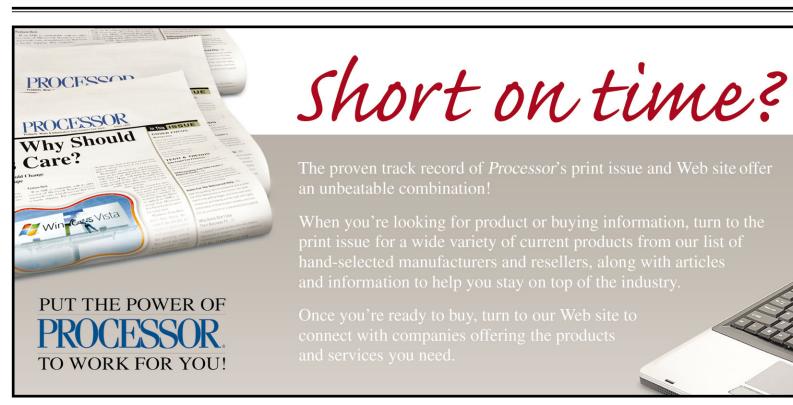
Interactive Intelligence Vonexus EIC is a Microsoft-based IP telephony application suite aimed at midsized enterprises and their branch/remote offices. It is strong in the telephony side, including switching, automatic call distribution, interactive voice response, conferencing, fax services, unified messaging, Web chat, desktop IP phone with presence management, and mobile features.

"Vonexus EIC is best suited for enterprises with 50 to 1,500 employees that use a Microsoft platform and require functionality beyond voicemail," says Rachel

Go to Page 11

Unified Communications Options For The SME

Vendor/Product	Product Description	URL
Avaya MultiVantage Express IP Telephony	Combines contact center software and integrated messaging in one server	www.avaya.com
Cisco Unified Communications Manager Business Edition	Designed for medium-sized enterprises with up to 500 employees and up to 20 remote sites; integrates the benefits of voice, video, mobility, and messaging on a single server	www.cisco.com
Provides SMEs with unified communications and collaboration tools that can help them improve customer responsiveness, optimize relationships with suppliers/vendors, and get new products out the door faster		www.ibm.com
Interactive Intelligence Vonexus Enterprise Interaction Center		
Microsoft Office Communications Server 2007	Software that delivers VoIP, video, IM, conferencing, and presence within applications such as Microsoft Office, Microsoft Dynamics ERP, and Microsoft CRM	www.microsoft.com



Unifying Your SME's Communications

Continued from Page 1 of several implementation projects all moving toward more unified and intelligent communications that interoperate with each other," Michael says.

Unified Communications & The SME

UC can benefit almost any enterprise, regardless of size. But because SMEs have less wiggle room to squander resources compared to larger companies, the technology can

Defining Unified Communications

What unified communications involves and the advantages it offers vary from enterprise to enterprise. To add to the potential confusion, analysts and vendors often have different definitions about what the technology is about. However, some common threads exist between the different options that are available. Unified communications should be able to:

- Bundle email, phone numbers, instant messaging, and other modes of communication into an integrated system
- Make it easier to contact colleagues or to be reached
- Offer more control about how and when employees are contacted
- Make use of legacy enterprise equipment
- · Improve productivity

make a lot of sense for smaller enterprises. In the name of "productivity," for example, many SME employees often have several different roles and less support compared to employees at larger companies who might have more narrowly defined job descriptions.

"In the SME world, people tend to wear many 'hats.' For example, a single person may be listed on the company Web site by name but also be the recipient of messages sent such as via phone and email and Web forms, to sales, partnering, support, accounts receivable, etc.," says Michael O'Neil, independent IT consultant and co-founder and CEO of the social media site IT in Canada (www.itincanada.ca). "Unified communications provides a means of managing messages without keeping five different mail sessions open simultaneously while also checking two to three different voice mailboxes."

For the SME employee, UC can mean having better control of exactly how she can be reached at any given time.

"If managed properly, presence systems can play a crucial role in an SME by allowing employees to control the preferred means of communication based on current status—whether they are available, traveling, working on a project, in a meeting, etc.," Herman says.

For the person trying to contact a particular employee, the technology can make it easier to reach the right person with the requisite skills or work roles when needed, Herman says. "For example, if a warehouse manager needs to get authorization to overnight a package, the business ERP or automation software can (if it supports unified communications integration) automatically connect him to an employee who is authorized to make that decision," Herman says. "Let's say an air-conditioning unit fails in the server room, and the facilities manager needs to find an employee who possesses HVAC repair skills. This can also be done through unified communications."

While some employee policies discourage the use of mixing personal and business communications, the reality of today's always-on work culture makes maintaining a separate work/off-time balance increasingly difficult. One possibility that UC can offer is to make sure that you get important messages when you need them, regardless of whether they are personal.

"The benefit is that you don't miss messages because you are out of touch with a particular communications source," O'Neil says. "It's also possible to apply management rules to the message stream—so, for example, a message from your wife, your boss, or your child's school is brought to your attention no matter where you are in your messaging infrastructure."

Take Control Of Your Life

Unified communications is also about empowering individuals to better control how and when others contact them. Many workers today, for example, are all too familiar with how communications serve more as distractions than as productivity tools. You may, for example, find yourself constantly going back and forth between trying to complete a task and receiving

email and IM messages that pop up on your PC screen or answering your cell or land-line phones. Instead, unified communications can mean more effectively harnessing communications technologies to help eliminate distractions.

"To properly leverage the efficiency of technology and maintain work/life balance and stress-free productivity, technology must be controlled instead of allowing it to control you," Herman says. "If you are a doctor or your business is a matter of life or death, you may not have a choice, but for most of us, technology is incessantly tugging at us, and we can be more efficient by managing it."

Value Add For Legacy Systems

Implementing unified communications in your enterprise certainly does not have to be about removing your legacy equipment and starting from scratch. Indeed, the technology should make use of your enterprise's existing communications infrastructure, which may include email, phone, IM, videoconferences, or other solutions.

Vendors already can offer unified communications "anywhere, anytime, with any compatible device," Joe Melfi, a technical marketing engineer for communications solutions provider D-Link (www.dlink.com), says. "This results in fewer wires, less equipment, and easier access."

The solution is also becoming more inexpensive, which makes it an even more attractive investment to better take advantage of an enterprise's existing network infrastructure.

"The 'push' is the fact that these systems are becoming more affordable and easier to manage, making them more accessible to budget- and cycle-constrained SME IT staffs," O'Neil says.

Least Privilege Gains Popularity

Continued from Page 1

John Moyer, president and CEO of BeyondTrust (www.beyondtrust.com), says companies have been slow to adopt least privilege in Windows environments, particularly because users need to run custom, in-house, and third-party-developed applications that require local administrator privileges. He says users also need administrative rights to install authorized software and apps such as ActiveX controls, as well as managing their own printers, system time, and other computer settings.

According to Moyer, one reason that least privilege hasn't taken hold so well is that Windows applications and activities

It's A Least Privilege Corporate World

John Moyer, president and CEO of Beyond-Trust (www.beyondtrust.com), says more corporations are seeing the value behind least privilege. "The push to create standard desktop configurations in organizations is making more people aware of the value of least privilege security. A standard desktop configuration enhances network security . . . [and] also reduces the cost of administrating desktops. However, standard desktop configuration projects must restrict administrator rights on all computers to maintain the standard configurations because it's impossible to control how users will inadvertently or intentionally change the configuration of their computers when they are administrators," notes Moyer.

"The federal government has mandated that . . . all [federal] agencies must adopt a standard desktop configuration called the Federal Desktop Core Configuration. We are also seeing corporations adopt this or similar standards. . . . With the entire federal government adopting a least privilege security approach, the rest of the corporate world won't be far behind."

require administrator privileges to run. He adds, "The early success of antivirus products is another reason least privilege security hasn't fully taken hold yet. Many companies felt that antivirus products alone provided them with sufficient protection from malware. Only recently have people recognized the shortcomings of signature-based antivirus software and the need for better layered protection from malware."

Difficult Implementation

Bill Jensen, product marketing manager at Check Point Software Technologies (www.checkpoint.com), says at the system level, least privilege is a nice theory, but it has been hard to implement successfully. Jensen notes, "Unfortunately, there are always bugs even at the kernel level that can potentially circumvent security privileges. This is why it is important to have an independent layer of security."

So why hasn't it taken the industry by storm? Jensen says, "Complexity. Least privilege means defining an individualized security policy for every single person or application. This is, well, nigh impossible. What is important is coming up with a system that allows you to approach this while keeping management simple. Check Point, by unifying its management architecture, lets companies simplify the management of a complex system that includes network, endpoint, or data security but also allows a greater level of customization for different scenarios."

Jensen says using products for network security and endpoint security actually increases an organization's ability to use the principle of least privilege. Jensen says, "For example, Check Point's VPN-1, by default, is installed with no traffic going through it—called default deny. Administrators then define what is allowed." He says other Check Point products can be used to lock down what is permissible to run on individual systems. Other industry players, such as Lumension Sanctuary (www.lumension.com) and SmartLine

DeviceLock (www.devicelock.com), provide out-of-the-box default policy enforcement functionality and software that controls which users or groups can access different types of devices.

Application For SMEs

In Muscat's opinion, the concept is relatively easy to understand, yet he says many companies find it complex to implement. He explains, "Many issues arise due to the fact that companies often tend to complicate matters by assigning permissions on a user basis, rather than applying access rights at group and domain levels."

So how can least privilege best be leveraged in the small to midsized enterprise?

Dave Wreski, CEO at Guardian Digital (www.guardiandigital.com), says the first step is to ask the right questions of your vendor. He says, "How does the internal architecture of the platform shut down attackers if something gets through? Is my email application or Web filter engineered with least privilege incorporated under the hood?"

Wreski says one of the best ways to leverage least privilege is to find vendors that have used this development in the past. He comments, "For this, it helps significantly to have both the OS and the application come from secure, unified development. Unified development from security vendors is one of the best ways to ensure that both applications and the platform are engineered with least privilege. Maximizing security requires this focus because having an OS come from one company and an application come from another reduces the chance least privilege engineering is both effective and usable."

Muscat says the starting point for SMEs is to assess the access needs of all of the employees in the organization. He says, "Grouping users would allow the assigning of privileges at the group level—one action replicated automatically to all users. This allows better control over security and access privileges configuration, and it

Contingent Measures

Dave Wreski, CEO at Guardian Digital (www.guardiandigital.com), believes least privilege is one of the main ingredients in the perfect security recipe. "Security is a process, and it requires the right technology, the right development, and the right support. Least privilege is one aspect of this development," he says. "If engineered properly, you can incorporate robust network defenses, endpoint defenses, and least privilege, all within an easy-to-use interface."

Wreski continues, "And as targeted attacks . . . become more successful, simply having network defenses won't be enough. Companies will need a contingency should something get through or should an employee act maliciously. Least privilege is one such defense. As attacks reduce in number but increase in impact, least privilege will become more of an issue as businesses look to vendors that address all layers necessary, not just the ones that are most 'sellable."

speeds up policy maintenance without compromising security. Changes at the group level translate into 'faster to implement, faster to roll back, and easier to maintain.'"

Check Point's Jensen says what is important is that every employee is given the minimum access rights possible for him to do his job. "There will be occasions," he says, "when an employee may need temporary access to do a new task; however, any permissions given should [be] temporary access, which lasts for the duration of the job. This should not be taken as an excuse to give employees more rights than needed."

Jensen believes that in some ways, least privilege is easier for SMEs because they have "simpler environments." He says the challenge will come from management because of the lack of people resources. Jensen notes, "Rather than focus on the technology, focus on the management aspects that will enable you to reach your goal of least privilege."

The Strategy For Unity

Experts Lend Insight On Methods For Planning & Implementing Unified Communications

by Christian Perry

As small and midsized enterprises continue to add communications technologies to their infrastructures, the quest to unify those technologies grows more relevant by the minute. Whether striving to keep on-premises employees connected or attempting to maintain the communications link with mobile employees, unified communications (or UC) is a goal increasingly sought after by companies in almost every industry.

But while the concept of pooling voice, email, instant messaging, faxing, Web conferencing, whiteboarding, and other communications into one cohesive unit sounds enticing for enterprises looking to boost efficiency, the planning and implementation required to pull it off can scare away potential converts. Further, such an undertaking almost guarantees resistance within the company, so managers looking to deploy UC will need solid plans in place for both the scope and implementation of the project.

A Few Common Misconceptions

Anthony ladisernia, director of network solutions with Forsythe Solutions Group (www .forsythe.com), details three common misconceptions about unified communications that often lead to objections in enterprises looking to deploy the technology.

1. "My infrastructure cannot support unified communications."

ladisernia says that while an existing infrastructure might need investment or "tuning," most SME-focused network routers and switches manufactured in the past 12 to 18 months can support UC.

2. "Unified communications is very expensive to implement."

Not so, says ladisernia: "There are many scalable and affordable ways to implement unified communications technology. Whether they are displacing legacy messaging equipment or building anew, organizations should carefully evaluate unified communications as part of their messaging strategy and roadmap."

3. "Unified communications will create support and user training issues."

On the support side, ladisernia says that by involving the IT infrastructure team in the UC roadmap planning, the team's natural resistance will diminish as it grows familiar with the advantage of managing a converged network. On the training side, while training is certainly necessary for successful UC implementation, training time will decrease as employee productivity and mobility improve.

Inspect The Tech

According to Anthony Iadisernia, director of network solutions with Forsythe Solutions Group (www.forsythe.com), there are certain steps that form the basic plan to implement UC-based collaboration in an organization. The first—and most important—is understanding the company's current network infrastructure.

"Many organizations still have a collection of disparate systems, servers, and interfaces, including traditional telephony, voicemail, fax machines or fax servers, email, IM, text, video, pagers, cell, PDA, and more," Iadisernia says. "It is critical to understand how this technology is used. Any product features that are key to the business need to be part of your new unified communications solution."

Second, he recommends obtaining an understanding of how each business unit operates. For example, are the units in multiple locations? Do they have multiple methods of collecting information? How will each business unit benefit from a collaborative environment? By talking to the users, managers can obtain insight into effective ways to map collaboration tools and functions into existing business processes.

Indeed, the technical transition is a crucial piece of the planning puzzle. Jim Koniecki, integrated collaboration solutions manager for Dimension Data North America (www dimensiondata.com/na), points to the complexity of such projects, noting that UC solutions can involve a migration or interoperability with an existing PBX, as well as with core infrastructure elements such as switches, routers, and firewalls.

Beyond the technical details, it's also a must to examine internal processes and see how they can best benefit from a unified platform. "Much of this depends on the specific organization and its particular function," says Ryan Dobb, president of NetQuest (www.nquest.com). "For example, call centers can use collaboration for distributing calls and using an internal IM client; salespeople can receive messages away from the office; and executives can use collaboration to ensure they only receive messages that are critical to their business."

Jumping Hurdles

Unified communication makes plenty of sense to workers in the trenches, but obtaining executive buy-in can be tricky, particularly when higher-ups can't fully grasp the breadth of the plan. Joshua Aaron, president of Business Technology

Partners (www.btp.net), says that executive buy-in is critical because it ensures that there will be a common vision for the use of the new platform and that it will align with business objectives.

"We find that running full demonstrations for senior management and even providing a pilot for the key executives and



stakeholders at the inception of a project usually gets the leadership team of the organization excited and energized about deploying the technology throughout the entire organization," Aaron says.

Perhaps not surprising, Aaron adds that it is senior executives, along with other busy business professionals, that typically voice objections to a UC system, primarily because they don't understand what they really can do with such a platform. "For instance, instead of placing an announcement on a group- or firm-wide distribution through the voicemail system, they will continue to email to people one at a time."

Ron Temske, vice president of Cisco solutions for Logicalis (www.logicalis .com), says that PowerPoint presentations don't do justice to the productivity gains that enterprises can realize when using a full UC solution. "When an executive can see first-hand the effects UC has had on other organizations, we generally see the role shift from our convincing executives that they need UC to their telling us how urgent it is for them to deploy UC throughout their organization."

Experts also recommend spreading UC-focused terminology throughout the enterprise to help adoptees grow more familiar with the technologies. "Collaboration is not that well understood in the SME space," says Pierre Kerbage, president of Network Logistic (www.networklogistic.com), a value-added reseller of Zultys (www.zultys.com) equipment and a member of Zultys' VAR Advisory Board. "The best way to plan for collaboration is to define it and explain to employees how and when it's used, as well as how it can significantly empower productivity.

Explain words like presence, secure chat, instant messaging with logging, unified messaging."

Proceed With Caution

After executives are on board, the natural inclination for some managers might be to barrel ahead at full speed to get a UC platform in place. But BTP's Aaron stresses that the smart plan is to implement the solution in phases.

"This could mean deploying the solution to select groups first before rolling the tools out to the entire company," he explains. "Through this process, organizations will gain valuable feedback from

users and ensure the adoption of the unified communications tools. In

a well-phased approach, the deployment team has the appropriate time to test the complete system functionality and minimize downtime and disruptions that could cause user frustration in the process."

But if a UC platform is implemented too quickly, Aaron says that problems could arise with user adoption, especially when it comes to the understanding of product features. NetQuest's Dobb recommends ensuring that all users have received training, manuals,

tip sheets, and related materials, and after the implementation, evaluations should occur to confirm that the technology is running effectively.

"Take the time to prepare and communicate the status of the project to your user community," Iadisernia says. "Collaboration will transform how your business communicates. Getting the user community excited about the project goes a long way toward a smoother implementation and a better return on investment."

Planning & Implementation Tips

Ron Temske, vice president of Cisco solutions for Logicalis (www.logicalis.com), offers additional tips for the successful introduction of a unified communications system.

Check the requirements. "Ensure that all interoperability requirements are understood and accounted for and develop an implementation schedule that is both realistic and nondisruptive."

Keep the lines open. "There are always issues when you're deploying technology. Proper communications determine whether those issues are quickly resolved or whether they turn into major problems."

Don't be afraid to experiment. "The most creative—and productive—ways of leveraging this technology usually come from the employees using it every day. Encourage your employees to look for ways to be productive, then reward them for sharing those tips with the organization."

Unified Communications Goes SME

Continued from Page 9
Wentink, director of product management at Interactive Intelligence.

Cisco Unified Communications Manager Business Edition

This is designed for medium-sized enterprises with up to 500 employees and up to 20 remote sites. It integrates voice, video, mobility, and messaging on a single server. This simplifies installation, support, and

ongoing management. Elements include Cisco Unified Communications Manager, which is the call-processing component; Cisco Unity Connection for voice and integrated messaging; and Cisco MCS 7828 Unified Communications Manager Appliance.

"Cisco Unified Communications Manager extends telephony features and capabilities to packet telephony network devices such as IP phones, media processing

devices, VoIP gateways, and multimedia applications," says Ann Swenson, senior marketing manager for Cisco Unified Communications.

Avaya MultiVantage Express

This product is aimed at companies with 101 to 1,000 employees. It is based on Avaya's IP telephony software platform, Avaya Communication Manager. Basic applications come already installed and

integrated. MultiVantage Express includes built-in call center software. With new one-number reachability, incoming office calls can be sent to a mobile phone or laptop, enabling workers to be reached easily. Other features include conference calling and call forwarding.

"The one-number reachability is an example of unified communications, which can find the right person at the right time, no matter what device they are on or where they are," says Manish Punjabi, director of midmarket solutions at Avaya.

The Challenges Of Unified Communication

How To Avoid UC Pitfalls In The SME

by Elizabeth Millard

WHILE UNIFIED COMMUNICATION enhances business processes, it can overwhelm networks, affect application performance, and require new policies and planning.

The key to implementation is to recognize the challenges early and anticipate what kind of pitfalls might lie ahead. With proper planning, many of those potholes can be avoided. Here are a few of the most common problems and how they might be handled before they affect the whole network.

Application Performance Problems

One of the largest challenges in a unified communications implementation is application performance, which can be particularly troublesome because it directly affects the user's experience, says Charles Thompson, manager of sales engineering at Network Instruments (www.networkinstru ments.com).

"If the user has a poor experience with new technologies like VoIP or on a Web conference, they might be less likely to embrace the technology," he says. To avoid

What You'll Need

Charles Thompson, manager of sales engineering at Network Instruments (www.network instruments.com), notes that the network team at an SME will need three main components for implementing an effective unified communications strategy:

- 1. Monitoring tools to understand performance and the interdependence between applications on the network.
- 2. Quality-of-service tools to guarantee that bandwidth flows to business-critical applications rather than unnecessary applications such as streaming media or P2P.
- 3. Awareness of being able to isolate issues of network contention, as well as overall network behavior, to eliminate application performance problems.

performance problems, he suggests first making sure that expectations are appropriately set and limitations are understood.

Another key step an engineer can take is to conduct a predeployment assessment of the network, he says: "Understand your current bandwidth load and existing place," he notes. "You need to secure commitment from management, which

Not Enough Expertise

Also part of a proper foundation are staff members who can deal with

helps ensure success."

Bandwidth Limitations

Traditional applications are very different from most unified communications applications, Thompson says. For example, if a

staff members more training will reduce

support issues and help plan for the future.

vices might add to overall budget numbers. Another way to reduce the pitfall of missing expertise is to plan on extensive training, Kraskey adds, especially with an eye toward making that education an ongoing endeavor. "As with any developing technology, the more it's deployed, the more it evolves to ease any issues that come up," he says. In the meantime, giving

> user accesses information from the Web, the data is sent over the network and then remains idle while it's being read.

> Videoconferencing, a unified communications application, is just the opposite, Thompson points out. When a company is holding a videoconference, the demand on network bandwidth is high and constant.

> "Any unexpected spikes in demand from other applications will be seen as performance hiccups by the conference participants," he says. "Web surfing isn't as prone to interruption from other applications on the network."

Too Many Tools

Tools can be a beautiful thing; their impact can be as simple as alerting the right people in an organization to an issue or as complex as supporting filtering rules, decoding packets, and aid-

ing with adapter selection, according to Kraskey.

"Overall, some tools take a lot of underlying technical knowledge, while others require none," he says. "The key is finding a balance that's right for an organization."

A common pitfall is to throw too many tools into the mix, he's observed. Software that might support exchanging files over the network could blend with monitoring applications, and there could even be several IP sniffers at play. "There are many tools, but organizations should not be pressured to buy them all," Kraskey says. "Tools are really secondary to a trusted advisor and good leadership."



network and application demands before you deploy more applications."

Quality of service is also imperative, and unified communications applications need consistent network performance because problems from other applications can easily impact the performance of unified communications applications, Thompson says.

Lack Of The Right Foundation

Much like other technology implementations, unified communications requires buy-in from management and discussion about what kind of key business drivers are involved.

Creating a unified strategy without tying business goals to expenditures can create problems in the future, says Tim Kraskey, vice president of marketing and business development at Calabrio (www.calabrio.com), a developer of unified desktop tools for IP-based contact centers.

"There can be a lack of planning and not having the right foundation in unified communications specifically. "One big pitfall is what I call 'HR fallout," says Kraskey. "Many companies aren't prepared for the changes in many day-to-day job functions brought about by unified communications."

Leadership, too, is required to guide companies through the types of changes that unified communications create, he adds. Small to midsized enterprises may not have a good level of IT support in place, but they may also lack the type of high-level, long-term vision needed. Kraskey recommends that staff expertise levels be scrutinized before implementation to find out if outside

Much like other technology implementations, unified communications requires buy-in from management and discussion about what kind of key business drivers are involved.

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Give Users More Control

Ensim Unify Enterprise Edition 1.5 Improves System Management Routines

SOMETIMES THE BEST WAY to increase the productivity of employees is to give those employees self-service tools that offer more administrative rights for basic tasks, such as managing distribution lists and resetting passwords.

Ensim's Unify Enterprise 1.5 system management software provides such capabilities. It lets enterprises quickly perform change requests with-

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This upgrade of Unify Enterprise supports Windows Mobile and BlackBerry

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\$20 per user annually (maintenance included); \$39 perpetual license (maintenance separate); free trial available.

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Ensim's Web-based Quick-Start Wizard walks users through multiple configurations settings.

devices and Microsoft Active Directory 2003, Microsoft Exchange 2003/2007, and BlackBerry Enterprise Server.

The template-based interface and Web-based Quick-Start Wizard walk administrators through post-installation configuration and walk employees through self-configuration options. Edition 1.5 also lets administrators set default groups for users; lock down user templates; manage user attributes; and transfer user accounts.

Additional features include a Webbased interface that offers customization and management control over administration rights based on each administrator's role. Systems admins can configure the software based on business policies. Edition 1.5 also includes an enhanced Web services API to execute integration with current systems.

STORAGE FEBRUARY 1, 2008

Dell AX4-5: Simple, Scalable Storage

SAN Array Offers Affordable, Easy-To-Use Features



As SMEs GROW, they add branches and remote offices, which increase the need for data storage without spending more of the IT budget. The storage therefore must be simple to deploy and easy to manage. To meet the need for entry-level storage for small and medium-sized enterprises, Dell has released the AX4-5 series of SANs.

Data on the AX4-5 is designed to be protected anywhere—in the controller, on the drive, or on the data path. Further reliability is provided through continuous background disk consistency checking; mirrored cache; and cache destaging, which means in the event of a failure, data stored in cache can be moved to disk, protecting against loss or corruption. Deployment and operation are designed for simplicity with the EMC Navisphere Express user interface. For users with multiple EMC arrays, this software offers a "single pane of glass" type of management in addition to data replication and migration tools.

Scalability and flexibility are crucial to the data storage solution of any SME, which is why the Dell AX4-5 is designed with scalable architecture and multiple drive options. The AX4-5 supports up to 60 drives on 64 hosts (which requires five enclosures), and with the EMC Navisphere Express, a user can add additional storage to the array in a short amount of time. Users can start with four drives and continue adding as greater storage needs arise. Supported servers include PowerEdge and PowerVault storage technologies.

The arrays support both Fibre Channel for 4GB architecture and iSCSI for IP networks, as well as SAS and SATA drives. This allows for tiered storage as users have the option of mixing drives to support high-performance needs, such as I/O applications, while using SATA drives for cost-effective storage. As needs arise, the AX4-5 series is designed to migrate data seamlessly and easily between different types of drives and RAID types.

Dell AX4-5

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A storage array that supports up to 64 hosts and up to 60 drives across five enclosures

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Physical Infrastructure

FEBRUARY 8, 2008

Access At The Rack

Chatsworth's LCD/KVM Console Provides Easy Access To Up To 16 Computers

As a Business Grows, IT resources must grow, too. By adding additional computers and other hardware, however, space tends to become more constrained. To help companies save valuable rack space without sacrificing functionality, Chatsworth Products created the new LCD/KVM Console. This console provides easy access to multiple rackmount peripherals, and it requires only 1RMU of rackmount space.



Chatsworth's LCD/KVM Console comes in single-, 8-, or 16-port versions and provides access to multiple computers using a set of rackmount peripherals. Multicomputer units come with a KVM switch. The console comes with a 15-, 17-, or 19-inch LCD capable of displaying resolutions of up to 1,280 x 1,024 SXGA. A tempered glass panel protects the display.

This 19-inch EIA rackmount shelf combines the LCD panel, a 106-key

Chatsworth Products LCD/KVM Console

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Combines an LCD, a 106-key keyboard, and a touchpad into a single unit that can connect up to 16 computers

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keyboard with numeric pad, and a built-in touchpad. The LCD/KVM Console connects to computers with PS/2 or USB keyboard and mouse connections using a single cable connection. Supported OSes include DOS, Windows, HP Unix, Linux, Novel 3.12-6, and Sun.

For increased ease of use and manageability, the Chatsworth console has built-in dual slides that let the LCD and the keyboard tray open independently. A keyed lock secures the console in the closed position when not in use. The KVM switch offers an on-screen display menu and password protection. With the KVM switch, users can search for computers by name or by using hotkey controls such as auto scan.

The console comes with an internal universal power supply with a connector for international use and a power cord with NEMA 5-15P plug.

STORAGE FEBRUARY 22, 2008

Cost-Effective Disk Arrays

HP StorageWorks MSA2000 Family Boosts Administrative Capabilities

VIRTUALIZED SERVER environments need increasingly centralized storage to maintain network efficiency and reduce costs. HP is offering a new option featuring low-cost data security: the StorageWorks MSA2000 (Modular Smart Array). This collection of enterprise-class disk arrays is economical yet optimal for expanding disk functionality.

Entry-level SANs are moving toward enhanced availability, so storage capabilities must expand. The MSA2000 arrays are powerful, with



four times the bandwidth of previous MSA generations. The StorageWorks family offers the MSA2000i (1Gb iSCSI) and the MSA2000fc (4Gb Fibre Channel); both can run on single or dual controller models. Each array is capable of scaling up to 36TB of storage.

Although the MSA2000 is constructed for use within SMEs, companies can use the storage system for secondary locations and remote backup. Users can deploy the MSA2000 on multiple applications along with SAS or SATA drives.

With the MSA2000, application processes occur faster to guarantee system accessibility. Business communication downtime is reduced thanks to updated redundancy tools. The MSA-2000 provides Snapshot and Clone software to protect enterprise data and prevent business downtime through rapid recovery services.

The MSA2000 complements HP BladeSystem customers' existing environment. Users can execute compound blade configurations vs. a single blade at a time. IT can supplement file services for the MSA2000 with ProLiant Storage Servers or StorageWorks EFS Clustered Gateway.

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Solidify Your Storage

BiTMICRO's 1.6TB SSD Has Ultra320 SCSI Interface

LACKING A HARD DRIVE'S mechanical latency, an SSD (solid-state disk) is much faster to respond to data requests in the multi-user, multitasking data center environment. SSDs are more shock- and vibration-resistant than hard drives and feature better temperature tolerances, lower power consumption, and silent and vibration-free operation. As prices fall and capacities increase, data centers will come to rely more and more on SSDs and other solid-state storage options.

Last fall, BiT-MICRO Networks announced a 4Gbps Fibre Channel SSD in a 3.5-inch hard drive form factor with an astounding top capacity of 1.6TB. Now, the company has unveiled a variant with an Ultra320 SCSI interface. The enterprise-class drive is intended for business, military, and industrial applications.

The E-Disk Altima E3S320 family will come in capacities from 16GB to 1.6TB.

The 16GB to 640GB models will have a 1-inch height, making them no larger than a typical 3.5-inchwide hard drive. The larger versions will be 1.744 inches tall.

Inside, the E-Disk Altima uses SLC (single-level cell) NAND flash memory. It can sustain data transfers at up to 230MBps, the company says. Of course, being an SSD, the drive's throughput figure of up to 30,000IOps (inputs/outputs per second) is what really blows any hard drive out of the water.

BiTMICRO uses proprietary wear-leveling algorithms to extend the E-Disk Altima's life, as well as custom error correction code to preserve its data integrity. The drive employs the company's proprietary

EDSA (Enhanced Datamover and Storage Accelerator) and LUNETA (Logical Unifier of Extensive Transfer Arrays) controllers.

The company should begin sampling the E-Disk Altima E3S320 in Q2 of this year. Volume shipments should follow in the Q3.

BiTMICRO E-Disk Altima E3S320

About \$40 per gigabyte

High-capacity, rugged, low-power server storage in a standard hard drive form factor

(510) 623-2341



www.bitmicro.com

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MarketPlace ads filled with in-depth information on new products.

	Product 2	Releases	
Continued from Page 16 screens. Any third-party signage-control system is compatible with the AV200 series of products. Security Kryptiva has released Email Encryption	ered by a large database of several millions of blacklined Web sites from more than 54 categories weed to fifter Web use. Web Filhering Proxy adds thousands of new blacklined Web sites to the cache of exist- ing blackline sites every day with its advanced pattern recognition, allowing geomography, new, and aponts Web sites.	access control) solution. Safe Access Life is a monitor-only version of Safe Access that evaluates the security posture of up to 250 endpoints using any or all of Still-Secure's three testing methods—agent-less, agent-based, and Web-hased nonper-sistent agent. By using Safe Access Life, users can accelerate the NAC process.	Installation Services by using remot access technology to position Symante Endpoint Protection securety over the Internet. Services include a preinstallatio session with a Symantee specialist, deli- ered at the customer's convenience Symantee Consulting Services can provid assistance for larger Symantee Endpoint
inclinerum, which scandendy integrates to children which scandendy integrates to exhause carried and antendecion couplillies and critically examines business-to-business email for compliance and liability education. Ilmail Eucryption Architecture medials Koppits Packagin Plagin, which illies direct integration of Email Eucryption Architecture with the sort; correct	as well as free email providers, to be blocked. The proxy is updated several times daily through a connection to SecPoint's Web site. ### Spectra Logic has announced it in now effering its hardware-based AES-256 Standard Edition BlueScale Encryption for free. The company stays hecuse its key	without netwerk changes or posing risk to end users. Safe Access Lite will test for operating system patches and hostines, security and browser settings, personal ferewall, assirias/antisypuses, and re- quired and probibed notivare, as well as worms, Trojato, and viruses.	Protection and Network Access Controvisionments with solutions for image time and operation. Symmator Endpoi Security Residency Services combine stating staff with Symmate resident or sultants who offer strategic solutions for the organizations' unique IT environments.
non Argenization with new tour's teerina neural application. Kryptiva Packaging Server, which packages the email for submissization, encryption, and proof of delivery; and Kryptiva Online Services, which submissizate incoming email. The solution is free to deventoud and install and no cay to deplay and manage. Additionally, IT administrators can deet to enable a sub- mission of email accounts to deplay Email Encryption Architecture.	stee, I no company says recurse in say management operates via the Hiraries. BlueScale 10 management operates was the BlueScale 10 management interface, mera now have encryption as well as key management options from one vendor, with no outlier software soedod. BlueScale Eucryption is available as a standard feature in the enterprise—class Spectra T950, midfevel T120, and departmental T50 tipe libraries, which were can configure with LTO, SOLT, SAIT, or integrated RXT disks. The T950—T120, and T50 come in	Sympathysis 33.0 offering penecution against complex mulware throats for corporate continuous. Country for Emorphis' new features include management dashouch, reporting improvement, and console unability enhancement. It is powered by a loyheld engine that merges classic upyware detection and remediation with Sunbels's VIPER technology, providing fast scanning and light resource usage. Users can improve the control of the c	Seneratio MAHLARS has uninounced the Therma Green Server, which the company claim that, in addition to brigat standard-comp att and energy-efficient, can generate energy while in suc. The ThermoGreen Serv- can distribute its own generated energ- ents a power distribution network, lettis your data center operate as its own power generating utility. According to AMI
8 SafeVet released a new USB token into data theft. The IdX y4000 USB token, tokeh is PCI DSS (Psysteet Card Industry that Security Standards)-compliant, user MCS Securyions totenhology and effects hardware-based key encryptions, generation, merge, and digital signing. In support digital signatures, thind-party PKI-easbfed applications, and entill encryption. SafeVet	Fibre Channel, ISCM, and SCM options. The BlueScale Encryption Key Management uses STEP (Standard Tape Encryption Protocol) format, while the encryption Directives are designed with a FIPS 140-2-compliant chip. The libraries are compatible with all major OSes and software packages. The company's Pro- fersional Edicion BlueScale Encryption.	ware command center, giving immediate access to their most used exports and policy controls. Additionally, the new reporting features simplify the scheduling and extonoizing of CounterSpy Enterprise's library of reports. Symantee has announced new services and tools to their organizations implement.	LABS, companies can use even less pow by combining a Thermoffence Sever wi 30 plus-type power supplies and low id wattage mainboard-based systems. The Thermoffence Servers are RelS- as EnergyStar 4.0 complant. 8 Dell, EMC. and Oracle announced if Oracle Optimized Warehouse for Dell at
is targeting the iKey 4000 at merchants who need to comply with the PCI DSS. SecPulat's Web Filtering Proxy, de- signed for use with its Protector, is pow-	which includes a broader feature set, starts at \$12,000. StillSecure has unveiled Safe Access Lite, a free version of its NAC (network	operate, and maintain Symantee Endpoint Protection 11.0 and Symantee Network Access Control 11.0. Small businesses with fewer than 100 seats are able to oti- lize Symantee's new Remote Expert	EMC, a preconfigured, validated da warehouse solution based on Dell Powe Edge servers and EMC CLARGON to networked storage systems. The Orac Optimized Warehouse for Dell and EM

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SECURITY JANUARY 25, 2008

Q1 Labs Upgrades Network & Security Monitoring Platform

QRadar Offers Enhanced Visibility, Log Management & Analysis

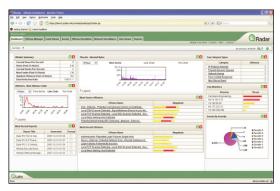
IN TODAY'S ENVIRONMENT, network security, compliance, and event management are of paramount concern. The latest version of Q1 Labs' QRadar addresses those concerns. QRadar is a dual network behavior analysis and security information and event management platform designed for greater control over network security.

QRadar collects data and live network behavior information from sources such as NetFlow, all network-attached security devices, applications, and OSes. QRadar then employs security event correlation and network behavior analysis to sift

through data and produce the most pertinent set of actionable data, which network admins can use to make informed decisions at a moment's notice.

QRadar displays network behavior via its flow viewer. The log management and behavior analysis architecture monitors the network and alerts admins to any threats, users, hosts, and assets accessing the network. QRadar's unified design also lets users monitor their network and security infrastructure from a single easy-to-use interface.

QRadar 6.1 lets users search network flow to improve network behavior analysis and security



QRadar's Dashboard tab provides an at-a-glance overview of the status of the network.

forensics results. Another new feature is the QoS monitoring capability for critical network apps such as VoIP. QRadar 6.1 also features augmented host discovery, asset-based alerting, tamper-proof logs in storage, and event and network flow data.

Q1 Labs QRadar 6.1

Starts at \$39,900; free upgrade to current users

Q1 Labs' network behavior analysis, log management, and security event management platform

(781) 250-5800

www.q1labs.com



STORAGE JANUARY 25, 2008

Secure Database Backup

Acronis Recovery Makes It Easy To Back Up Your MS SQL Database

EVERY COMPANY MUST ensure that its database backups meet regulatory requirements while also being easy to manage, maintaining space efficiency, and retaining the ability to be restored quickly if needed. Acronis Recovery for MS SQL Server helps companies meet these requirements.

Recovery gives IT managers and database administrators the ability to securely back up and recover databases, including tables, logs, and other components. It has the ability to recover from a point just before a failure or disruption without loss of work, enabling business functions to be restored without significant disruption.

Key features include:

Wizard-driven management console. This console makes the product easy to use, even for those without extensive

database administration experience. A wizard guides you through the scheduling process to reduce the possibility of errors. The Management Console also provides centralized management by automatically discovering all database servers and displaying them with status information.

Smaller archives. Acronis Recovery can create backup images that are up to 90% smaller than the original databases.

Different compression levels are available to allow you to optimize for faster performance, smaller size, or a balance of both.

Encryption. For added security, Recovery uses industry-standard encryption technology; AES is available with three key

lengths: 128, 192, and 256 bits.

Resource management. Companies can allocate CPU and bandwidth resources during the backup process to keep the process transparent to users.

Disaster recovery plan. Administrators can create and email disaster recovery plans that include step-by-step instructions for recovering database information. With these instructions, staff—even those with-

out database administration skills—can restore databases quickly.

FTP support. For even greater peace of mind and security, Acronis Recovery for MS SQL Server lets companies back up database images offsite via FTP.

Acronis Recovery for MS SQL Server

\$499 per server

Gives companies the ability to recover a database to a good configuration in minutes

(877) 669-9749



PHYSICAL INFRASTRUCTURE
FEBRUARY 1, 2008

Simpler Installation Of Underfloor Cabling

Panduit's GridRunner System Improves Cable Routing

INCORPORATING A CABLE-ROUTING system into an organization's existing infrastructure can be a costly and time-consuming process. However, with the right system that is both adaptable and easy to install, routing data and power cables under a raised floor does not have to be a tremendous drain on a company's time and resources. Panduit has released a new series of products that make cable routing quick and convenient.

Panduit's GridRunner system includes preassembled mounting brackets that make

installation time-effective and ensure a company's new underfloor cable-routing system can get up and running in a minimal amount of time.

By providing the brackets, Panduit also helps companies reduce the cost of implementing the routing system.

The modular system consists of a series of wire baskets that make up the cable pathway; the drop-in wire basket sections make setup simple. When combined with the pre-



assembled mounting brackets, there is no need to cut components to fit. The entire system is designed to assemble and install quickly.

The wire baskets also provide another advantage: With the open nature of the wire basket, air travels freely through this component to reduce the likelihood of overheating.

Panduit put a lot of thought into the design of the GridRunner components, and the parts do not damage cables due to poor design. The GridRunner parts have rounded edges and bend-radius control corners. Panduit has also used a bonding feature that electrically connects all components and provides electrical protection.

Because GridRunner is a series of individual parts, a company can combine dropin wire baskets and preassembled mounting brackets in a way that makes sense for the company's IT infrastructure.

Panduit GridRunner Underfloor Cable Routing System

A modular underfloor cable-routing system that uses a series of drop-in wire baskets and preassembled brackets

(800) 777-3300

FEBRUARY 1, 2008

www.panduit.com



PHYSICAL INFRASTRUCTURE

Reach Out To Remote Systems

Raritan Dominion KSX II Offers New Management Features In A Streamlined Package

WHEN NETWORK PROBLEMS and server errors crop up, IT personnel must be able to rapidly diagnose and fix the problem. That means remote access and control is necessary, and security is a must.

Enter the Dominion KSX II remote access appliance. The new model brings together serial-over-IP, KVM-over-IP, and power management and houses them in a streamlined package. The Dominion KSX II is intended for secure, out-of-band control of servers, PBXs, routers, and switches in



branch offices and remote sites. It also supports virtual media file transfers to allow rollouts of updates and bug fixes.

Users have BIOS-level access to remote systems, right down to being able to reboot a server or restart a switch. (Some power monitoring and cycling requires Raritan's

Dominion PX power strips.) A browser-based HTML GUI offers a top-down look at the equipment under the unit's control.

All of the Dominion KSX II's communications are protected with 256-bit AES and

integrated authentication. It also supports strong passwords and locks out users after a number of failed logon attempts.

Another key feature is Absolute Mouse Synchronization, which maintains the remote user's mouse settings no matter which server is

being controlled. The Dominion KSX II is CommandCenter-certified, so multiple units (and connected hardware) can be commanded from one IP address. That's a big help to organizations with far-flung resources.

Should the network fail, the Dominion KSX II offers a built-in modem with dial-

back capability. The appliance works with AAA servers, as well as SNMP and Syslog event management systems.

The KSX2-144 includes four KVM, four serial, and two power control ports; the KSX2-188 has eight KVM, eight serial, and two power control ports.

Raritan Dominion KSX II

KSX2-144: \$1,999; KSX2-188: \$2,499

Remote access appliance with serial-over-IP, KVM-over-IP, virtual media, and power management features

(800) 724-8090

www.raritan.com



PRODUCT OF THE WEEK

Regulate Power To Any Device

Flexibility With CPS' Intelligent Controlled Power Strip

by Sixto Ortiz Jr.

CPS, AKA COMPUTER Peripheral Systems, is a Georgia-based privately held company that's been in business since 1981 manufacturing products intended for data communications. Today, the company designs and manufactures a variety of products targeted at the networked communications marketplace.

At first glance, the company's Controlled AC Power Strip looks like an ordinary power strip. However, CPS (770/945-0643; www.cpscom.com) has engineered intelligence into the device, enabling value-added features that go beyond the typical power strip's primary function.

Power In The Data Center

Today's networks and data centers have to run 24/7 to provide unflinching support for today's demanding business applications, which increasingly rely on sterling network performance to get the job done. Power is one of those vital, albeit overlooked, elements necessary to keep networks and data centers humming. Unfortunately, no one ever thinks about power until it goes AWOL.

According to an Uptime Institute white-paper ("Fault-Tolerant Power Certification Is Essential When Buying Products for High-Availability"), even though the percentage of facilities-attributable outages (which involve elements such as power, physical access, cabling, and cooling) is only 4% of the total number of reported outages, these types of faults account for 25% of total information downtime. So even though these types of faults don't occur very often, they can be quite disastrous because of the potential for extended downtime that they can



PRODUCT OF THE WEEK

CPS CONTROLLED AC POWER STRIP

Description: A power strip with intelligence; can be controlled remotely using a variety of remote controllers

Interesting fact: CPS provides the various software applications that administrators can use with these power strips, including Heartbeat and Auto Ping, free of charge.

(770) 945-0643 www.cpscom.com inflict on an organization, usually at the worst possible time.

Kenneth Brill, executive director of the Uptime Institute, says three factors adversely impact efficient power and cooling management in data centers: the lack of processes for retiring old equipment that draws power, the lack of hardware consolidation via virtualization, and the enabling of power-saving features in hardware. For example, says Brill, up to 30% of the IT load in a typical computer room is not doing anything because an application has been moved to a new platform and the hardware hasn't been turned off.

Clearly, there is a mar-

ketplace and technical need for managing power in an efficient and intelligent way. For example, data centers and networks all benefit from the ability to manage power remotely. This becomes important for extended businesses that have assets scattered over a wide geographical area, especially those areas in remote locations that are sparsely manned or unmanned altogether.

The Humble Power Strip Gets A Makeover

Richard Fetsko, CPS' director of marketing, says the power strip has been around for a long time and is used in various industries and applications. And, he adds, "intelligent" power strips have been around for more than 10 years; these devices got their start resetting analog modems that couldn't answer a connection request due to a fault in the modem. These early iterations of intelligent power strips, says Fetsko, simply counted rings and reset the AC jacks where faulty modems were connected after a certain number of rings was reached.

The CPS Controlled AC Power Strip, says Fetsko, incorporates new methods of control along with software utilities that enhance the functionality provided by the power strip. For example, the Controlled AC Power Strip can be controlled both locally via serial port and remotely via a variety of remote controllers. The type of remote controller used depends on the specific application; for example, a Touch-Tone Controller can be used to communicate with the Controlled AC Power Strip via a telephone line.

Administrators can use an IP controller for control via an IP network; this allows administrators to remotely control hardware either manually or automatically. And for those sites where networking or POTS connectivity is unavailable, a cellular controller is available for entering and sending commands to a power strip using the cellular network.



Some of the newer capabilities in intelligent power strips allow for the monitoring of network or server performance and the automatic resetting of equipment as conditions dictate, says Fetsko. The company's Heartbeat software, for example, is used to automatically reset servers that hang; the software accomplishes this by connecting to the server's serial port and automatically

resetting it when it fails to send a periodic signal (the "heartbeat") from its serial port.

Another example of remote monitoring and control capabilities is the company's Auto Ping software, which automatically sends RESET commands to network equipment that may be locked up or malfunctioning. Again, this enables the remote monitoring of equipment and the automated assessment of equipment health. Lack of response to pings from the software indicates a problem. This allows administrators

to remotely address unexpected equipment failures and possibly prevent further damage to expensive network equipment.

Reasons To Buy

According to Fetsko, these intelligent power strips are finding their way into a number of applications and locales. For example, locales range from office environments and server farms to observatories, communications towers built on remote locations, and even undersea environments. Applications run the gamut from the automatic resetting of server and network equipment to the resetting of telemetry equipment and general usage in kiosks, digital signage, classroom control, and test labs.

Other features, he adds, include heavy-duty commercial construction with strong

levels of surge protection and EMI/RF filtration capabilities. Also, pairs of AC jacks can be controlled separately, and up to 10 units can be daisy-chained, allowing for up to 30 devices to be separately controlled. In addition, says Fetsko, daisy chains can be either located close to each other or spaced up to 1,000 feet apart by connecting devices using telephone or CAT 5 cabling.

TECH SPECS

CPS manufactures and markets three models of power strips: the ARR, ARR+, and CPS. The following comparison chart displays the three products and their features:

	ARR \$89	ARR+ \$99	CPS\$ \$115
Power Strip Hardware Configurat	ions		
All "Controlled AC Jacks" react to commands simultanerously	X*	X*	
Each "Pair of AC Jacks" (three) can be controlled separately			Х
Daisy-chain up to 10 units together		Х	Х

*Number of "Controlled AC Jacks" specified at the time of order. Other AC Jacks are always ON. This may eliminate the need for other power strips and/or surge protectors.

Control Methods (may be combin	ed)			
Ring Count Trigger (six unanswered rings)	Х	Х	Х	
Serial, RS-232, or USB commands (adapter required)		Х	X	
Automatic with free software		Х	Х	
ITTO Optional Internal Touch-Tone controller	Х	Х	X	
Password protection, status inquiry, and remote programming	\$25	\$39	\$49	
User-Programmable Features				
RESET (OFF time)		Х	X	
Ring count Trigger		Х	X	
Initial Power Up Delay (avoid rapid lighting surges)		Х	X	
Power Up State (ON/OFF)		Х	X	
AC Jack Pair Separation Delay (for sequential power up)			Х	

Product Releases

Do you

have a new product that data center/IT managers would be interested in learning about?

Send your press release or related product information to press@processor.com.

CLIENTS

■ Business Objects announced Business-Objects XI 3.0, a single, enterprise-scale platform that helps ensure that all people connected to an organization have access to the information they need. Rather than simply numbers and text, BusinessObjects XI 3.0 provides business intelligence with integrated text analysis, which allows the thoughts and opinions of customers and businesspeople found in unstructured sources (such as sources from the Web, notes fields, and emails) to be applied to business intelligence. Additionally, BusinessObjects XI 3.0 delivers consumable external information on demand, which allows organizations to compare and track performance metrics against direct competitors. New features in version 3.0 include tools for search and exploration, mobile business intelligence, and desktopbased metrics.

Messaging & Telephony

■ Intermedia has released Secure Mail, a SaaS (software as a service) offering de-

signed for Microsoft Exchange that encrypts email and provides compliance with archiving rules for several industries. Secure Mail encrypts email in Outlook and only allows access when a recipient types the correct password. The software then archives the message to comply with regulations such as those by the SEC, as well as Sarbanes-Oxley, HIPAA, and FRCP. Secure Mail costs \$7.95 per mailbox each month and has a setup fee of \$7.95 per mailbox.

■ MessageOne has introduced EMS Rapid Archive, an email archiving service that addresses revisions to the FRCP and new state rules for email discovery and provides real-time e-discovery and litigation holds. With this SaaS, users can search and review messages live, and EMS Rapid Archive has a timeframe of one day for deployment and

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messages live, and EMS Rapid Archive has a timeframe of one day for deployment and does not require maintenance work. This SaaS can place legal holds on evidence and is fully integrated with MessageOne's Email Continuity and EMS Email Security. EMS Rapid Archive is available starting at \$1 per user per month for 500 users.

Preedom 2008, an add-on to Exceed 2008, which is used by organizations to access Unix applications. As part of the Exceed product family from Hummingbird, the Open Text Connectivity Solutions Group, Exceed Freedom 2008 lets users work together on projects in real time and share their Unix desktop environments and applications over any physical distance. Organizations can also enhance communication effectiveness, decrease idle time, and hasten business development and processes with Exceed Freedom 2008. Additionally, with Exceed Freedom 2008, IT departments will be able

to merge over-distributed and under-consumed Unix servers to centralized application centers, which in turn lets organizations take advantage of the unemployed resources of the present network infrastructure.

NETWORKING & VPN

■ 2X released 2X ApplicationServer 6, software that allows users to publish and manage Windows applications from remote Windows, Mac OS, and Linux desktops through screen updates, rather than sending client server data. Version 6 includes the 2X Web Access Portal, as well as features for single sign-on, CPU load balancing, multiple server farm access via SSL, and advanced universal printing for terminal services. The Web Access Portal is a dynamic Web interface that displays a list of published applications based on the user's login criteria. The CPU load-balancing functionality limits users to a single instance of any application to prevent rogue applications from consuming CPU resources. Additionally, ApplicationServer 6 offers multiple-monitor support, so you can remotely display an application on multiple screens.

Akorri released BalancePoint 2.0, management software for virtualized data centers. Version 2.0 offers a number of new features, including GuidePoint Performance Index, Scorecard Reporting, and support for storage virtualization. The GuidePoint Performance Index provides IT staff with mathematical key performance indicators to help management initiate optimization projects or make purchasing decisions. The Scorecard Reporting feature notes performance and utilization data for ESX and virtual machines, physical servers, application services, and

STORAGE

storage usage. Additionally, BalancePoint 2.0's support for IBM SVC and HDS UVM allows BalancePoint 2.0 to provide crossdomain performance management. The software is delivered as a virtual appliance that's prebuilt and preconfigured with an operating system inside a virtual machine.

. **■ Courion**, in partnership with **Identropy**, announced the Identropy Managed Identity Services, or iMIS, for the Courion Enterprise Provisioning Suite. iMIS is a flexible, onpremise management and alert issuance software that allows customers to extend engineering resources and maintain control over their own workflows while allowing for dayto-day system management and monitoring, as well as leverage the Web-based iMIS Portal Dashboard in order to improve productivity and focus on other security and compliance issues. The flexibility allows customers to implement system patches for upgrades while supporting the compliance responsibilities of the customers' needs.

■ A new, unmanaged Gigabit switch from Ethernet Direct features two 1Gbps copper SFP ports and 16 10/100TX ports. The HUG-1628 is an industrial switch with redundant power inputs (12 to 48VDC) and a fault relay that can trigger an external controller, such as a PLC (programmable logic controller). Auto-negotiation via auto-MDI/MDI-X, various safety features, and an SFP fiber slot that can accept typical or overhaul fiber modules (multimode or single-mode, 10 to 80km) round out this impressive package.

■ RadView Software has introduced WebLOAD 8.2, which offers new elements Go to Page 18

FEBRUARY 1, 2008

STORAGE JANUARY 25, 2008

Optimal Storage Support

DataCore Unveils VM Starter SAN Bundle For Upgraded Portability

MODERN ENTERPRISES OF all sizes are seeing an increasing need for storage virtualization as they continue to expand to virtual environments. DataCore's release of the featureloaded, readily accessible VM Starter SAN package

offers newly enhanced data management capabilities for SMEs. This cost-effective SAN provides simplicity for any VM (virtual machine) yet runs efficiently on physical hardware.

Storage networking is now more convenient with the iSCSI-enabled VM Starter SAN package, capable of asynchronous IP mirroring and virtual disk emulation. The portability of the VM Starter SAN highlights its functional consolidation of virtual storage: The single server bundles allow for mobile protection of multiple VM environments.

The integrated SANmelody features make data migration (via SANmotion) an easy delivery task for the user due to real-time repurposing. Old information can be placed elsewhere in the system, while primary data is allowed to occupy disk resource space for optimal utilization. Disk backup is simplified through the high-speed snapshot feature in which consolidated volumes are copied at one location rather than from multiple points.

DataCore's remote site recovery feature allows for maximum enterprise support through dual bundle operation. The simplified bundles demonstrate the advantages of



high-performance mobile VM SANs. For integrated systems relying on the portable Starter SAN, DataCore recommends that businesses use two bundles in order to provide moment-to-moment location continuity. One SANmelody package remains onsite, while

a second occupies the remote location. The Starter SAN can also function effectively as a single system and provide equally operative storage recovery.

DataCore's VM Starter SAN supports all major virtual machine vendors, such as Citrix, Oracle, Sun, VMware, and Microsoft. Additionally, the Starter SAN can run on Linux, Mac OS, and Netware, as well as Microsoft and Unix.

According to DataCore, the VM Starter SAN is cost-effective because it fills the spot in the market between smaller data protection systems and large-scale, high-priced platforms. It can provide broad system security, so the internal stability of your business won't be jeopardized.

DataCore VM Starter SAN

About \$4,000 per SAN server

Portable SAN bundle featuring auto-allocating storage support, enhanced data migration, and remote site disaster backup

(877) 780-5111

DataCore[™]

www.datacore.com

RAID 6 For Maximum

Winchester Systems' FlashDisk SX-2302S Offers Up To 60TB Of Storage

Data Protection



WHEN YOU'RE DEALING with massive amounts of storage, a RAID 6 setup is ideal because your disk array can survive two drive failures, and it provides an added layer of protection when rebuilding a drive. The FlashDisk SX-2302S from Winchester Systems is a SAS hosted disk array with dual-parity RAID 6 to offer maximum data protection.

The FlashDisk SX-2302S includes dual hardware ASICs (one for each of the independent parity calculations in RAID 6), so the SX-2302S offers RAID 6 performance similar to what you would see in a disk array that uses RAID 5. According to Winchester, RAID 6 dual parity offers 500 to 30,000 times longer mean time to data loss than RAID 5. The FlashDisk SX-2302S delivers a 1,150MBps sustained throughput and more than 78,000 disk I/O operations per second while maintaining mirrored cache for controller failover. The speedy ASIC hardware ensures successful disk rebuilds after a failure.

The 2U base unit comes with a single RAID controller and 12 high-capacity disks, and you can add four 2U expansion shelves—each with 12 drives—to expand

the FlashDisk SX-2302S to 60TB when using 1TB drives. You can fit up to 252TB of storage into a 42U rack, making the SX-2302S ideal for enterprises with high-capacity needs. The SX-2302S also features two SAS 4X wide host ports for multihost connectivity without the costs of implementing a Fibre Channel infrastructure.

The FlashDisk SX-2302S supports full-featured protection in RAID 0, 1, 3, 5, 6, 1+0, 15, 16, 30, 50, and 60. It comes with 512MB of cache memory, upgradeable to 2GB of cache memory per controller. The FlashDisk SX-2300 line also provides real-time remote monitoring, automatic drive failure detection, failed drive rebuild, hot-swap drive capability, and online expansion. The base unit's nonvolatile cache uses a Li-Ion battery that works for a minimum of 72 hours, and it features dual hot-swap, redundant 460/530-watt power supplies.

Winchester Systems FlashDisk SX-2302S

Starts at about \$16,000

A SAS hosted SATA disk array with RAID 6 that can expand to a storage capacity of 60TB with 1TB drives

(781) 265-0200

www.winsys.com



STORAGE JANUARY 18, 2008

Enhance Technology Adds To Its UltraStor RS Line

RS16 IP-4 Handles High-Impact, High-Volume Tasks

ENHANCE TECHNOLOGY'S RS16 IP-4, the newest member of the company's UltraStor RS Series of storage products, gives IT departments a host-independent,

transparent, and driverless method for adding RAID (0, 1, 3, 5, 6)protected storage to exist-



ing infrastructures, regardless of the operating system or hardware already in place.

Supporting Microsoft VSS and coming in a 3U, 16-disk modular rack design, the RS16 IP-4 offers such features as a built-in 64-bit RAID controller, up to 2GB of cache and 3Gbps SATA disks. Advanced features available via the RS232 interface include multiple array settings and SNMP and security options.

Constructed to handle high-volume and high-impact network storage tasks, including those related to video broadcasting and backup and recovery applications, the UltraStor RS16 IP-4 also includes an ability to let administrators configure the appliance in just minutes. Additionally, auto-configuration abilities are available via a rear-located LCD control panel, and remote Web browser-based management and monitoring are also possible. An included menu screen allows access to set up the RS16 IP-4's configurations, as well as change settings as storage needs change

over time. Physical protection comes in the way of two included redundant, hot-swap-pable power supplies and two fans to guard against hardware-failure interruptions.

Beyond the quad Gigabit Ethernet ports, the RS16 IP-4 also includes N-Way Mirror and enterprise-

class Snapshot for point-in-time recovery protection against accidental deletion of data. The appliance is suitable for Microsoft Exchange and SQL Server environments, as well as disk-to-disk backup, database pools, image acquisition, near-line storage, data centers, media and asset libraries, and shared SANs. Dynamic online RAID expansion is possible without total system downtime being required.

Enhance Technology UltraStor RS16 IP-4

\$4,750

An intelligent iSCSI RAID system that includes a 64bit RAID engine and up to 2GB of cache and supports 3Gbps SATA disks

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PHYSICAL INFRASTRUCTURE

JANUARY 18, 2008

secondary ping ad-

dresses, enable or

CPS Automatic Power Cycle Keeps Equipment Online

New Device Automatically Power Cycles Frozen Devices



WHEN IT COMES TO appliances that control

network traffic, ordinary monitoring tools

aren't enough. Sure, the monitoring system

alerts you to traffic disruptions, but the

entire network remains down until you're

able to reach the frozen router or modem

and restart the power cycle. To speed up

the process, CPS (Computer Peripheral

Systems) offers the APC (Automatic

Power Cycle) appliance, which monitors

network status and automatically restarts

CPS built the APC unit with DHCP

routers and modems in mind for plug and

play applications, but customers can use the

device to cycle power for any critical net-

work component. The APC unit sits

between the AC outlet and the selected

devices. It regularly pings two IP addresses

to confirm the network's Internet connec-

tion is functioning. When the APC deter-

mines a device has frozen (due to ping fail-

ure for both IP addresses), it recycles power

Customers can configure multiple APC

unit features by connecting the device to a

PC. The PC must run a terminal emulation

program. You can change the primary and

to its AC OUT outlet for five seconds.

power to a frozen device.



disable ping-out capabilities, adjust the ping interval from its 2-minute default, or extend

the power-off countdown from the default five seconds up to 90 seconds and more.

The APC unit also supports out of band backup with its Ring Reboot feature. Customers can ring the APC device over a DSL or phone line to initiate a power reset. The APC device resets after six rings by default, but customers can change the ring number via the unit's serial connection.

The APC appliance is small and light. It has two AC receptacles (one IN, one OUT), one RJ-45 port, and three RJ-11 ports. The device also sports a Power/Reset button and a rocker for the 15-Amp circuit breaker, as well as status LEDs. The device supports 110VAC to 240VAC power inputs.

CPS Automatic Power Cycle

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www.cpscom.com

Computer Peripheral Systems, Inc.

Product Releases

Continued from Page 17

to support Web Services and an improved scripting experience through a new engine for connecting values in enterprise applications. WebLOAD 8.2 features an upgraded WebLOAD Console that manages load tests in order to develop the vigor of the tool for bigger and longer-running tests in order to reach the requirements of the most demanding enterprise performance tests. Its new correlation engine decreases the need for manual scripting through the authoring phase of the performance test. Additionally, the Web 2.0 technologies, such as AJAX, have been improved by enhancing the building blocks for Web Services.

The JBoss Enterprise SOA (Service-Oriented Architecture) Platform, an enterprise-class, open-source networking application, is now available from **Red Hat**. The platform is designed to integrate applications, services, information, processes, and people into one distribution with a light footprint and simple installation. Features include scalable clustering, JEE technologies, and a highly customizable base. Other capabilities, such as application and service integration and mediation, service orchestration, and business policy and rule management and integration, are included in JBoss Enterprise SOA via JBoss ESB,

■ Shunra VE Desktop Standard, a single-user desktop application testing tool, is now available from **Shunra**. The tool is designed to allow testing of applications under different network conditions by turning a LAN into a virtual, simulated WAN and then acquiring and providing immediate end-user feedback. Based on Windows, the tool is designed for ease of use for network novices.

JBoss jBPM, and JBoss Rules.

PHYSICAL INFRASTRUCTURE

- Dickson has announced Dickson Graphat-a-Glance Flat Panel Temperature and Humidity Data Loggers, designed to help IT personnel oversee and manage the temperature and humidity of data centers with real-time feedback. Dickson also provides tools for downloading and analyzing this environmental data. The display is 3.4 x 4.5 inches (HxW), and Dickson has added support for flash memory. The data logger has 32KB of storage capacity and both audio and visual alarms. Dickson offers the Graph-at-a-Glance Flat Panel Data Logger FT300 and FT325 for temperature only and the FH320 and FH325 for both temperature and humidity. Prices start at \$299.
- Two hospital/medical-grade power strips, the PS-415-HG-OEM (four outlets) and the PS-615-HG-OEM (six outlets), are now available from **Tripp Lite**. The UL-recognized devices are designed to be employed on devices such as mobile medical carts. Both power strips feature NEMA 5-15R-HG receptacles, an all-metal case for durability, and built-in 15A resettable circuit breakers. The 15-foot AC power cord and switchless design prevent accidental shutoffs.

SECURITY

■ Catbird has launched HypervisorShield, an advanced security appliance that defends against network access threats and attacks. The newest release in Catbird's V-Security product, HypervisorShield manages a virtual infrastructure through its critical hypervisor layer. Thanks to uninterrupted, automated network monitoring, this Catbird service can detect weaknesses within virtual environments. HypervisorShield utilizes the Catbird V-Agent appliance for internal network security so system coverage is more comprehensive and traffic can flow more efficiently.

Additionally, NAC automatically quarantines compromised devices within the virtual network. This enhanced safeguarding component is part of Catbird's V-Security, a security-as-a-service solution for VMware.

- **CoSoSys** announced the release of the new Endpoint Protector 2008. Functioning as a DLP solution, Endpoint Protector 2008 lets enterprises protect against data leakage, stolen data, and faulty information transfers through wireless USB connectivity. Endpoint Protector 2008 aims to control unpredictably harmful devices and stop viruses, along with other threats. This protective system features data monitoring among portable storage devices and provides new tracing capabilities for IT management. If data is accidentally deleted, Endpoint Protector 2008 copies critical information onto a network storage server. Through the TrustedDevice concept, data encryption is enforced to secure lost or stolen hardware. CoSoSys's Endpoint Protector 2008 runs on Win2000/XP/Vista.
- The XGate wireless network security device from Global Security One provides antivirus, antispyware, and a firewall, plus Web filtering and SMS remote shutdown capabilities. The product also acts as a router, supplying VPN functionality and automatic setup.

■ Novell announced its newest security and event management solution, the Novell Sentinel, which will allow retailers to meet the detailed PCI DSS (Payment Card Industry Data Security Standard) requirements. PCI DSS protects consumers from data fraud and identity theft by providing strict guidelines for merchants with regards to safeguarding credit card information while effectively engaging in automation, validation, and end-to-end management of the PCI process. Novell Sentinel PCI Solution contains comprehensive features for PCI DSS requirements, including automated reports; customization for PCI evolution; a customizable interface; compliance reporting of up to 25 reports and 15 correlations rules; and monitoring and auditing of the implementation process.

SERVERS

■ **HP** expanded the HP BladeSystem portfolio with an Integrity blade designed to handle memory-intensive data center workloads while helping businesses lower costs, save energy and space, and decrease deployment time. As the company's first four-socket Integrity server blade, the HP Integrity BL870c combines the modular infrastructure and energy efficiency of HP BladeSystem with the business-critical capabilities of Integrity servers. To help take the guesswork out of building an Integrity blade solution, HP also has created Solution Blocks for its Integrity servers. The BL870c builds on the strength of HP's BL860c by offering twice the processing power and twice the memory capacity. It also provides the choice of Microsoft Windows, HP-UX 11i v2, HP-UX 11i v3, OpenVMS, RedHat, or SuSE operating systems. Furthermore, HP Solution Blocks for Integrity server blades simplify the deployment of enterprise applications and optimize the use of the HP BladeSystem enclosure to save time and money.

STORAGE

■ CaminoSoft announced its newest solution in Information Lifecycle Management, the Managed Server HSM software for Apple Macintosh environments. Managed Server HSM provides policy-based, automated storage management and file archiving for both Mac and Windows computing environments to a single storage

Product Releases

center. HSM can be used to set up policies to reclaim production storage resources for active file usage while also transparently migrating inactive Macintosh files to their archival storage platform.

■ **Dell** introduced the Dell Storage Simplification Assessments portfolio in order to simplify the evaluation and selection of storage, backup, recovery, and archiving environments. The offerings will help customers improve the management and scalability of their storage and backup infrastructure while helping them cope with the dramatic increase in the volume of data in traditional and virtualized settings. By leveraging nondisruptive tools and processes, Dell Assessment services can deliver information to the customer in days instead of weeks. The Storage Simplification Assessments portfolio includes three options. The Storage for Server Virtualization Assessment helps customers evaluate their existing storage infrastructure to help ensure data is properly managed in virtualized environments. The Backup, Restore, and Archive Assessment analyzes an organization's backup and restoration environment and helps to address recovery time objectives. The Data Management and Storage Technology Assessment provides customers with a detailed analysis of their existing storage infrastructure in order to determine the storage technologies needed to meet their business needs.

■ Imation introduced two optical media duplicators that enable simple CD and DVD duplication. The Imation CD Duplicator and Imation CD/DVD Duplicator deliver highperformance disc duplication without software, cables, or a PC. These portable, standalone disc-to-disc systems can create copies of important data quickly and accurately with the touch of a button. Compatible with 12cm or 8cm discs, the Imation CD Duplicator operates on a 52X CD-RW drive, while the CD/DVD Duplicator features a 16X DVD±R/RW drive. These high-performance duplicators deliver continuous copying without the need to cool the system in between duplications, and a user-friendly LCD menu offers numerous options for maximum system functionality. The Imation CD Duplicator can duplicate one master 700MB CD to CD-R media at up to 52X speeds in about 2.5 minutes and can duplicate CD discs to CD-RW media at up to 32X speeds. The Imation CD/DVD Duplicator duplicates a single master 4.7GB DVD at up to 16X speeds in about 11 minutes. It can also duplicate discs to CD-R/RW, DVD±RW, and DVD±R DL media.

There are a couple of Cube RAID arrays available from **Infortrend**. The EonStor A08S-C2131 and A08S-C2132 are SAS-to-SATA II arrays intended for desktop use. They support up to eight SATA II hard drives and connect to the host via multilane SAS. The A08S-C2131 features one power supply unit and one SAS port, whereas the A08S-C2132 supports two PSUs and has two SAS ports. High-definition video editors will be especially interested in a fast subsystem like this, but anyone who needs a RAID 5 or 6 with up to 8TB of storage space should take notice.

■ Network Appliance launched the Store-Vault S550 network storage appliance, which is ideally suited to the archiving needs of small to medium-sized enterprises. The Store-Vault S550 gives organizations the room to grow with a capacity of up to 12TB per unit. Additionally, NetApp's latest Snap-Manager for SQL Server Store-Vault Edition lets Store-Vault S550 and S500 users perform point-in-time recovery for SQL data hosted on the appliances without taking a

performance hit. The StoreVault S550 owes its expansive capacity to a redesigned chassis that now supports 750GB and 1TB drives. The high capacity also lends itself to server virtualization and remote offices replication. StoreVault S550 is available starting at \$5,535. SnapManager for SQL Server StoreVault Edition starts at \$1,999.

NetApp also bolstered its NetApp Manageability Software Family with several releases designed to help users handle IT resources in data centers. The SnapManager for Virtual Infrastructure offering lets users automate data protection and perform recovery functions with their VMware environments and virtual machines. NetApp also announced that all Windows-based SnapManager products are now fully compatible with VMware virtualization software. NetApp's newly announced Provisioning Manager delivers policy-based automation and better capacity utilization. SnapManager for Virtual Infrastructure and Provisioning Manager will be available this spring. Enhancements to NetApp's Protection Manager and Data ONTAP 7.3 will become available at about the same time. NetApp also introduced its Authorized Professional Service Partner Program and a handful of professional services, including Virtualization Assessment, Virtualization Architecture Planning, and Server & Storage Virtualization Services.

Finally, NetApp announced the NetApp Kilo Client, a testing environment that enables customers to test NetApp storage deployments on large computing grid environments under real-world conditions. NetApp's Kilo Client is a 1,500-node diskless enterprise server farm that runs most major operating systems, including Windows, Unix, and Linux, and it supports NAS, FC SAN, and IP SAN protocols to help users plan, construct, and deploy a data center architecture that will suit it for the long haul. NetApp's patented FlexClone technology takes quick snapshots of the data center to deliver almost instantaneous image provisioning without sacrificing performance or needlessly consuming resources. Current NetApp customers can access the Kilo Client test lab immediately.

■ NTP Software has released NTP Software QFS for NAS, IBM Edition 6.0, which allows users to automatically evaluate unstructured data, manage which files are to be stored in the storage environment, and decide how resources are used. NTP Software QFS for NAS, IBM Edition 6.0, provides infrastructure that helps users filter out illegitimate files. Additionally, NTP Software QFS for NAS, IBM Edition 6.0 includes IBM System Storage Proven, improved administrative reports, automated system monitoring, Advanced End-User HelpSite, and support for multiple languages.

■ RELDATA has made available Adaptive Storage Wizards for the 9240 Unified Storage Systems and Gateways. Storage administrators can reduce the complexity of daily management of disk virtualization or setting security restrictions. The open-architecture form enables IT to modify storage for any particular application. Further, wizards can simply link to other network wizards for effortless task organization. According to RELDATA CEO David Hubbard, "The easiest way to simplify storage management is to adopt innovative storage systems designed specifically to lessen the strain on IT administration time and resources. RELDATA provides this innovation better than anyone else in the industry, and with our Adaptive Storage Wizards, we are bringing new levels of simplicity to the

data center."

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RPC18

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RPC 22

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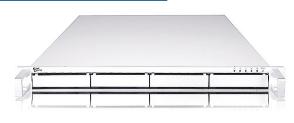
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STORAGE



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STORAGE

FEBRUARY 22, 2008

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MOST SMALL TO midsized enterprises have been slowly moving toward disk backup as tape simply can't match the reliability and speed offered by disk. But many companies still rely on tape for at least a portion of the backup process, particularly for data stored offsite. The Idealstor Teralyte combines the

speed of SATA disks with the portability and reliability of tape, making it possible for businesses to move to 100% disk-based setup for both backup and offsite storage.

The Teralyte is easy to use and integrate into almost any environment, and you can use it with your existing backup software or

with the bundled iBac software. iBac only backs up files that have changed since the previous backup, reducing backup times, server load, and bandwidth. iBac's native format backup means restoring files is as easy as dragging and dropping them.

Once backups are complete, data can be replicated to other disks, or the Teralyte's Disk Management software can prepare disks for safe removal. Each Teralyte comes with a rugged shock-protective caddy and carrying case, so you can safely take disks offsite for backup and disaster recovery.

The Teralyte can use SATA disks of any capacity up to 1TB (native), from any manufacturer. It comes in three models: The Teralyte 1000 1-bay desktop unit, the Teralyte 2000 2-bay desktop unit, and the Teralyte 2000 Rackmount 2-bay unit. All models come with a PCI 32 eSATA controller and cables and require Windows 2003 Server or XP on the host system.

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Teralyte 1000: \$1,995; Teralyte 2000: \$2,995; Teralyte 2000 Rackmount: \$3,495

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PHYSICAL INFRASTRUCTURE FEBRUARY 15, 2008

Teralyte 2000

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THE LIEBERT FDC from Emerson Network Power provides the flexible power distribution your data center needs in a standalone cabinet that fits within a standard rack footprint. You can place the cabinet by itself or among other rack enclosures in virtually any location within a row of racks. This so-called "in-rack" location means your power distribution is closer to the load and reduces the need for vast amounts of under-floor cabling.

The newest 480V version of the Liebert FDC brings higher voltages right to the rack, letting you take advantage of new

high-density servers that can handle 480V. And because UPS output can be sent directly to the servers without being converted to 208V or 120V, you eliminate lost energy. With 84 poles (two panelboards),

the Liebert FDC helps ensure you won't run out of circuit breaker poles before reaching rated capacity. You can access panelboards individually through hinged access covers, performing any service without exposing the other panelboards.

The standard FDC offers front and rear access and a bottom cable exit; a

top cable exit is optional. Local and remote power monitoring capabilities are available, including an Enhanced Monitor with

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SECURITY FEBRUARY 15, 2008

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Security service management.

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ested in full-service encryption management and offers decryption and encryption resources.

Desktop defense. Users are able to secure desktop files and guard them at any location. Utilizing Microsoft Information Rights Management, users can create access controls that live with the file's content rather than location.

Overall enterprise security. SecureFile has the capability to protect against data breaches and secure administrative documents for external file sharing. Additionally, automated key management

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OPINIONS

Building Blocks For Storage Systems

Hard drives organize their data into blocks. These user data blocks are regions of the magnetic media that contain user data. These blocks are located in regions of a disk called a sector. These drive sectors are located along the concentric tracks on the surface of the disks. Within each sector is also located servo and error correction information that allows the magnetic heads to stay on track so they can accurately read and write data, and for the electronic channel to recover the data without errors. The sectors also contain information that allows the file system to reassemble the data blocks into computer files. The file system, usually located in a computer or server, creates files with useful user data.

It Seemed Like A Good Idea At The Time

For the past 30 years, the size of the sectors on a hard drive was limited to 512 bytes for many operating systems, and this has been true for Windows and the ATA interface. Large drives back then were several megabytes in size. The number of 512byte blocks in a hard drive 30 years ago was not nearly as large as is required today for hard drives as large as 1TB.

Because the number of sectors has increased with storage capacity, the sector header data capacity is now larger. Thus, with a fixed sector size, as the total storage capacity increases, the formatting efficiency (the ratio of the data left on the drive for the user after nonuser data is recorded to the original drive storage capacity) decreases.

A longer sector block size also allows creating a more robust ECC (error correction code) for correcting data errors more efficiently and allows new ECC technologies that will be a critical step to higher drive areal densities. The same percentage of

overhead for a long block is much more efficient than in a short block, as the number of combinations of correctable error patterns is dependent on the length of the data block. Combining larger format efficiency and more robust ECC to achieve higher drive areal densities means that larger sector size drives provide a boost to the user-accessible storage capacity on the disk drive.

Other OSes, such as Linux, have allowed larger data sectors on hard drives, and refor-

matted drives with larger sectors can be found in products such as digital storage systems that use hard drives and Linux or some other open-source operating system. However, Windows-based systems have not supported disk sectors larger than 512 bytes to date.

All Hail The 4K Block

These factors have led to a standards effort to create a 4,096-byte sector standard (often referred to as the 4K sector). This sector size is eight times larger than the older 512-byte sector. 4,096-byte implementation is well underway, with early HDD products available

for testing and system development from a number of major drive manufacturers.

A 4KB sector hard drive is expected to have a higher storage capacity than a 512byte sector hard drive. This higher storage capacity is based on the lower system

COUGHLIN

₹ Tom Coughlin is the author of numerous authoritative reports on digital storage and its applications. He is also the founder and organizer of the annual Storage Visions Conference (www.storagevisions.com) and lead consultant for Coughlin Associates, which provides digital storage technical and market analysis and consulting services. Coughlin is a frequent writer and international speaker on digital storage and storage applications. You can find out more about him at www.tomcoughlin.com.



overhead as well as facilitating an increased areal density for future drives. This means that drive manufacturers can make higher-capacity hard drives with increased reliability and a faster time to data. These improvements will allow the construction of computers and storage systems with greater storage capacity and performance than would be possible with the 512-byte

Combined with the growing use of virtualization, deduplication, and other storage technology, 4K sector drives will provide more efficient storage utilization, lower energy costs, and greater storage economy.

While virtualization and deduplication are mostly software improvements, 4K sectors offer a true hardware enhancement.

Two Approaches

HDD companies working with HDD controller developers and BIOS producers have begun to supply sample drives for testing by OEMs. Two approaches are being taken to implement the 4K drive. The first is 4KB

emulation using existing operating systems to support the longer sector sizes with a minimal change in hardware or software. This method will probably be the first to be marketed. The second approach is a so-called native 4K solution, which requires a new OS and will allow a more advanced, high-performance version of 4KB sector drives. Microsoft's Vista is expected to support all implementations of 4K data sectors for ATA interface HDD products.

The hard drive and storage systems industry is about to make a major change in the basic architecture of disk drives with the change to 4KB sectors. This will have significant benefits to storage system designers and end users.

According to Dr. Ed Grochowski, who with Dr. Martin Hassner of Hitachi Global Storage Technologies was a leader in the 4KB sector campaign, "It is expected that 4K will be nearly totally implemented in the next five years."

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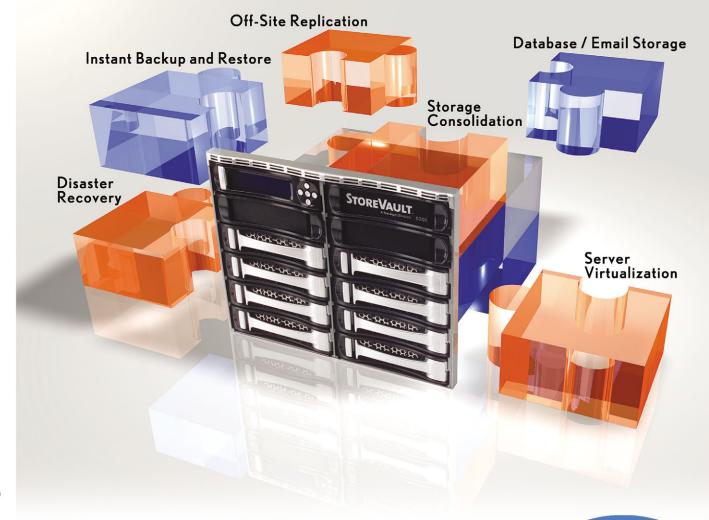
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Moving Toward Software-Based RAID

Tapping In To Fast Multicore CPUs For Performance & Flexibility

by Kurt Marko

RAID IS ONE OF THOSE core concepts of computer architecture that has achieved such a level of longevity and ubiquity that it's easy to take for granted. Like other mainstays of system design, such as cache memory and multiprocessing, a concept so fundamental surely is past its glory days of technological innovation, settling into a middle age of incremental improvement and cost reduction.

However, with the breakneck pace at which servers are increasing their computational horsepower—with multigigahertz, multicore processors now the norm—some RAID designers are indeed finding new tricks to teach the old dog. A recent technology trend is so-called software-assisted RAID, with the goal of lower cost and

potentially superior performance by utilizing unused processor cycles on multiprocessor servers.

Overview Of RAID Controller Technology

RAID has historically been implemented either entirely in software or via dedicated hardware. The former approach is common on every server OS, in which a software layer sits on top of the block-level disk device driver, providing the mapping between logical RAID arrays and physical drives. In this scenario, the host CPU does all of the RAID array calculations, such as generating parity bits for redundancy, and I/O management. By contrast, hardware RAID controllers have dedicated circuitry, usually custom ASICs and I/O processors, to offload this workload and act as a liaison

With the breakneck pace at which servers are increasing their computational horsepower—with multigigahertz, multicore processors now the norm—some RAID designers are indeed finding new tricks to teach the old dog.

between the OS and disk arrays. Over time, exponential increases in CPU power have blurred the lines in this bifurcated system.

According to Greg Schulz, principal at StorageIO (www.storageio.com), current RAID implementations can be segmented into five approaches, from purely software solutions to hardware-based designs (see the "Software-Hardware RAID Continuum" sidebar).

Software RAID vs. Hardware Controllers

The primary difference between software and hardware RAID, says Ciprico (www .ciprico.com) Senior Vice President of Marketing and Development Andy Mills, is where the RAID processing takes place. In traditional controllers, calculating and managing the block-level redundancy information occurs on a dedicated CPU with attached memory, while software RAID uses the host processor for this workload.

Now that systems have greater CPU capacity, Andrew Reichman at Forrester Research says, "there's a sense of, do you really need the offload" of specialized hardware? Adding that with the majority of servers running at no more than 20% utilization rates, "CPU is not a particularly scarce resource," he says.

For newer systems with processing power to spare, Mills says software RAID offers superior performance, greater flexibility, and lower cost. Ciprico's benchmarking indicates performance gains are particularly

Software-Hardware RAID Continuum

Greg Schulz, principal at StorageIO (www .storageio.com), says current RAID implementations can be divided into the following five approaches:

- **1. Entirely Software:** RAID drivers bundled with server OS
- Optimized Software: Third-party drivers, such as Ciprico's (www.ciprico.com), optimized to exploit server chipset capabilities to enhance performance and lower CPU overhead
- 3. RAID-on-Chip Hardware Assist: A hybrid approach that boosts performance by adding "RAID assist" hardware either directly on a server motherboard or on an I/O expansion card; still uses server CPU for the bulk of RAID computations
- 4. Internal Hardware Controller: The traditional host bus adapter with a dedicated processor and memory to offload all RAID overhead from the server CPU; interfaces with an internal I/O bus such as PCI Express or PCI-X
- 5. External Hardware Controller: Similar in functionality to the internal controller but integrated with an external drive array; accessed via either a storage network protocol (such as Fibre Channel or iSCSI) or disk protocol (such as SAS)

great when writing to RAID 5 arrays—in some cases doubling the throughput of a hardware controller. Mills says this is due primarily to the performance difference of the respective processors. A RAID host bus adapter typically has an 800MHz to 1GHz processor, according to Mills, while today's servers sport multiple cores running at 2 to 3GHz.

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SECURITY FEBRUARY 8, 2008

More Security, Not Resources

Webroot's E-Mail Security SaaS Helps Keep SMEs Safe

EMAIL IS A PRIMARY MEANS of communication in the workplace. It can also be a source of viruses and massive amounts of spam. It takes time and effort to manage unwanted email and can occupy valuable personnel. Webroot's E-Mail Security SaaS (software as a service) provides the means to manage and secure email without the need for additional hardware, software, or manpower.

Benefits of E-mail Security SaaS include low cost, easy implementation, and real-time, on-demand reporting. The service protects against all known viruses and 98% of spam. Support is

EMAIL IS A PRIMARY MEANS of communication in available 24x7x365 with a 99.999% uptime the workplace. It can also be a source of viruses guarantee.

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With Managed Encryption Service using Transport Layer Security, the service encrypts email at even the desk-to-desk and peer-to-peer levels. Inbound and outbound rules can be set to manage content and event-based email, and rules can be customized for specific occurrences or general traffic flow. The image protection features built into the service specifically target offensive or distasteful images that could find their way to an employee's inbox. Every image is scanned, and if the resulting data matches that of any known salacious images, the email will be logged and either deleted or quarantined.

For the sake of continuity, up to 28 days of inbound and outbound emails will be retrievable from secure, mirrored data. This data can be accessed via Webmail, which allows users to access and send the data from any browser, whether in or out of the office. With the Webroot E-mail Security SaaS, all email is archived in data centers in different geographical locations for recovery in the event of a disaster.

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November 16, 2007

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TODAY'S ENTERPRISES are filled with vast amounts of data in a variety of formats in seemingly endless numbers of locations. Finding the information you need can be daunting, which is where programs such as those from dtSearch can be essential.

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dtSearch can also create (and search with a single request) an unlimited number of indexes. Since you may want to search files that dtSearch has not indexed, dtSearch also does unindexed, as well as "combination," searching. All dtSearch products can index more than a terabyte of text in a single index and create and search an unlimited number of indexes. Search time is typically less than a second, even across terabytes of data.

Along with the terabyte indexer, all dtSearch products include more than two dozen indexed, unindexed, full-text, and fielded data search options; support for hundreds of international languages; display of Web-ready content with highlighted hits and all images, links, and formatting intact; built-in HTML converters for hit-highlighted display of other popular file types; and distributed or federated search options, with display of local and remote content.

The dtSearch product line also embeds the dtSearch Spider, providing support for public sites, secure content HTTPS, password-accessible sites, and forms-based authentication; searching of static and dynamic content; and relevancy-ranking of spidered and non-spidered content.

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Next-Generation Asset Management

Evolution To Becoming All-Inclusive

by Joe Rudich

As the country as a whole recognizes recent downturns in economic growth, all areas of business are facing increasing calls to better demonstrate their value. IT departments within small to medium-sized enterprises are seeing this pressure as much as, if not more than, any other business area. "Looking at assets in terms of procurement and amortization no longer begins to suffice as IT supports dynamic services for even more dynamic business needs," says Dennis Drogseth, vice president of EMA (Enterprise Management Associates; www .enterprisemanagement.com).

More Than Physical Components

Traditional perceptions of IT see these organizations as a "cost center," but according to Drogseth, managers need to move management perception toward the idea that IT is a necessary internal provider of business-critical services. The cost center perspective is served by asset management, which focuses on physical resources such as servers, printers, or telecommunication links. To quantifiably demonstrate the quality, performance, costs, and value associated with IT, one key element is to turn asset management into a means of

measuring value of services, not just of components.

"A strong ITAM program that helps executives control IT costs and risks is critical for today's enterprises," says Lori Sechio, chief executive officer of TekMethods (www.tekmethods.com).

"IT services are becoming more and more integral to business competitiveness," notes Drogseth, "so that IT is gradually maturing to recognize that its services are its 'products' in support of business goals and that its infrastructure, SW [software], and outsourced assets need to be planned and measured relevant to the service/business contribution."

Showing value requires accounting for cost and performance and will require moving beyond the traditional requirements of asset management to a holistic approach EMA calls "next-generation asset management," or NGAM. A key goal of NGAM is to offer a way to change perceptions of enterprise IT away from "cost center," but it also helps supply another essential piece of information: demand data. NGAM helps organizations get a handle on demand for IT services by providing detailed insight into who is using them. NGAM quantifies and helps drive the three vectors of IT organizational empowerment in the enterprise: quality, cost, and demand.

Drogseth says, "This demands a more cohesive approach to IT asset management than in the past. Our recent research shows that about a third of IT asset management

organizations still don't integrate asset and service planning. But a third do, while an additional third don't integrate these yet but plan to in the future. It requires a different way of working [and] organizational and cultural change, as well as technology change. Traditional asset management techniques are heavily siloed and fragmented, as well as just murky in their relevance to primary vs. secondary business objectives."

Assets Plus Service

The general notion of NGAM is that it represents the gradual convergence of asset management and service management. As such, NGAM views assets as performing, dynamic entities contributing to IT services and not merely as static entities that simply go through life cycle procurement to retirement with a passing nod to TCO. Next-generation asset management provides a means for monitoring the dollars-and-cents perspectives behind running IT as a dynamic business.

In the NGAM model, services are the end products (and hence the ultimate assets) for any IT organization. Therefore, all components—infrastructure, operational costs, contracts for outsourced services—ultimately must be understood in terms of the way they map to the services they support. NGAM intersects with a whole host of management disciplines, broadly working in conjunction with service accounting

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Products Supporting Next-Generation Asset Management

CA Asset Management r11

Addresses IT asset management challenges by providing automated tracking and discovery capabilities that enable the management of assets across complex and distributed IT environments

www.ca.com

HP OpenView AssetCenter

Aims to reduce costs and drive business decisions by consolidating asset information using a powerful, centralized CMDB (configuration management database)

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Microsoft System Center SMS

Includes configuration management and asset intelligence intended to accelerate the description of asset value to business

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N(i)² Suite

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Internet Blocking vs. Buffering

Which Approach Is Right For Your SME?

by Sandra Kay Miller

IN ITS "2007 WASTING TIME SURVEY," Salary.com found that employees squander about 20% of their workday on personal Web surfing, chatting, gaming, and downloading content. For both small to midsized enterprises and larger organizations, that's a lot of their money being spent on Fantasy Football, MySpace, and YouTube.

The rise of personal Internet usage at work can be traced back to when home users typically had slower dial-up connections at home and lightning-fast Ethernet at the office. Even as personal broadband services, such as DSL and cable, are becoming ubiquitous, employees still download music, chat with their friends, and conduct

Internet access. Products such as BeAware Corporate Edition from Ascentive (www ascentive.com) allow organizations to monitor employees' surfing and Web-based application usage in real time, has a screencapturing ability, and provides detailed reporting regarding employees' online activities, as well as their application usage. Similarly, software packages such as Echo from Pearl Software (www.pearlsw.com) and CyberPatrol (www.cyberpatrol.com) offer SMEs tools to monitor employees' computer usage, whether it be accessing illicit Web sites or misusing peer-to-peer programs.

Most enterprise Web-filtering solutions have incorporated buffering features into their products as more companies want to protect against litigation, data loss, and malware infestations while monitoring their employees' online activities without putting the brakes on productivity. Web-filtering solutions often provide the ability

corporate Internet usage policy is all about," says Dean Drako, CEO and president of Barracuda Networks. His customers want their employees to be productive, to use the Internet, email, and instant messaging.

Chenxi Wang, principal analyst of security and risk management at Forrester Research, doesn't think that blocking or buffering should be mutually exclusive. "Buffering is basically monitoring and reporting. The question is how much do you actively block and how much do you monitor and log?"

Big Brother

While monitoring what workers do on company time may sound ideal to employers, many view it as an invasion of privacy. "Companies obviously have the right to make sure that their employees are being productive. Blocking sites is much less invasive of employee privacy than using software to read emails or monitor where employees go online," says Lew Maltby, president of the National Workrights Institute in Princeton N I

Equally offensive to employees is the insinuation that those who manage their time effectively and complete their assigned work are somehow being dishonest by chatting with friends or shopping online with downtime during office hours. "When I'm stuck on hold, I used to pass the time mindlessly surfing the Web until I got through to a live person," laments a customer service representative whose supervisor reprimanded him for excessive hits on nonbusiness-related sites.

Ultimately, most organizations turn to a blend of blocking and buffering to cover all the bases. "I think organizations would do themselves a disservice if they are using a buffering-only approach. It should be the case that blocking is selectively enforced and real-time, content-based filtering is absolutely necessary," says Forrester's Wang.

Security Factor

In addition to curbing wasted time during working hours, companies are turning to both blocking and filtering solutions to cut down on malware disseminated via the Web.

"There is a set of content out there that is clearly malicious and clearly inappropriate; organizations should always block that. There is no other way about it. Then there are sites on the Internet which are not malicious but serve no legitimate business purposes. Individual organizations can make their own decision as to whether to block those," says Wang.

Barracuda's Drako lists security as the top reason businesses are now routinely blocking access to social networking sites, followed by productivity, bandwidth, and legal liability.

Consider that in November, according to a *Washington Post* article, McAfee (www.mcafee.com) found several popular recording artists' MySpace pages infected with spyware along with malicious MySpace friend requests that delivered a barrage of downloaders, Trojans, and a remote administration tool. While MySpace itself is a legitimate Web site, it has little control over content, including malicious code, that its users post.

Ascentive's Schran points out that employee monitoring solutions can also reduce internal security threats in addition to Web-based threats. "If your employees are downloading files to a USB device, our software will record that action," he says.

Maltby considers it unrealistic to expect that employees won't do any personal Web surfing at work. "Rather than trying to prevent it altogether," he says, "companies should use software to enforce reasonable acceptable use policies."

Most enterprise Web-filtering solutions have incorporated buffering features into their products as more companies want to protect against litigation, data loss, and malware.

personal business using company assets while on the clock.

The initial solution was to simply block access to offensive URLs, especially ones that served pornography, hate speech, and gambling. Still, financial, news, and shopping sites continued to sap employee productivity. As the Web has matured, the number of interactive sites and applications has exploded, leaving employees spending hours updating their Facebook pages or chatting away on instant messaging when they should be working.

Block Or Buffer

To regain control over employees' online time, many organizations have locked down their networks with Web filtering and blocking solutions from Barracuda Networks (888/268-4772; www.barracuda networks.com), Websense (www.web sense.com), and Secure Computing (www.securecomputing.com). But the pervasiveness of the Web into daily business has left many of the solutions—based upon whitelists, blacklists, and keywords—hampering legitimate business when their filtering solutions return false positives, thus limiting employees' ability to do their jobs.

The next step toward reining in Web usage at work has been to buffer employees'

to give employees access to the Internet during set times, such as lunch and nonworking hours.

Adam Schran, chief executive and founder of Ascentive, believes organizations are wise to allow employees unfettered Internet access for a limited time during the workday—for example, over lunch. He compared at-work Internet usage to taking personal telephone calls; however, unlike phone calls, it's often hard for co-workers to "overhear" personal Web usage. "We have clients that allow their people to turn off the monitoring for 30 minutes or an hour every day so that employees can send messages to the kids or do personal stuff for a reasonable amount of time," says Schran.

Similarly, Barracuda Networks has found that some of its customers set up their Web Filter appliances to warn employees instead of outright blocking. Instead, when employees attempt to access Web sites or applications contrary to the defined acceptable use policy, a message is displayed with a reminder that all sites visited are being logged.

"If you're planning a business trip, it might be OK to visit a travel site, but if you are planning a vacation, maybe there should be a gentle reminder of what the

Blocking vs. Buffering Comparison

Blocking

- Stops all traffic, whether it is legitimate or not, possibly hampering employee productivity
- Can prevent the installation of spyware and surfing to malicious Web sites
- Less possibility for policy violations to occur
- Poses minimal invasion of privacy
- Limits bandwidth-intensive sites and applications

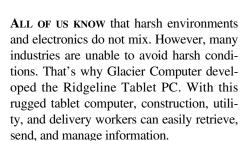
Buffering

- Allows all or even suspect traffic to be accessed but issues warnings and creates log entries
- Leaves the door open for possible exploit code access via infected Web sites
- Requires more administrative examination to determine policy violations
- Can be viewed as violation of employees' privacy
- Can allow bandwidth-intensive sites and applications

CLIENTS FEBRUARY 8, 2008

Rugged & Mobile

Glacier's Ridgeline Tablet PC Brings Computing Power To Harsh Environments



This rugged tablet computer can withstand repeated 3-foot drops to concrete, and

water and humidity extremes at virtually any temperature. The Ridgeline Tablet PC can operate in temperatures ranging from -20 to 60 degrees Celsius. This tablet withstands even greater storage temperatures, ranging from -40 to 70 C.

For workers on the move, the Ridgeline is portable and comes with a choice of a 10.4-inch SVGA or XGA transmissive TFT touchscreen display with a sunlight-

readable option. Numerous hard drive options are available and up to 16GB of Compact Flash memory can be added.

This tablet runs on WinXP Pro or Embedded and can run any application. It uses a VIA Eden 1GHz processor and can be configured with up to 1.25GB of DRAM.

For extra efficiency and functionality while on the go, Glacier includes Bluetooth 2.0 and 802.11a/b/g connectivity. Should your needs require GPS, there is an optional built-in GPS with integrated antenna.

On the front of the device you'll find various application buttons, including 12 numeric keys, one software keyboard button, four programmable function buttons, and a four-way navigation button with integrated Enter button.

Many connectivity ports are available, including two USB 2.0 ports, a VGA output, RJ45 and RJ11 jacks, headphone jack, microphone jack, and a docking connector. This tablet also comes with an internal microphone and stereo speaker.

Glacier Computer Ridgeline Tablet PC

Starts at \$3,000

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Moving Toward Software-Based RAID

Continued from Page 24

Software RAID can also be highly scalable, says Mills, noting that Ciprico's driver "can span across core-logic disk I/O ports, as well as Ciprico host bus adapter controllers and external DAS boxes supporting the RAIDCore architecture. It is one of the most scalable RAID solutions available today."

A software RAID design also allows functionality to be added and enhanced more easily, without the hassle of swapping out an HBA or upgrading its firmware. Mills notes that many of Ciprico's customers will initially license software for just a basic RAID 1 scenario, but should their needs grow, features such as RAID 5 or 6 can be added easily via a license upgrade. "The flexibility of software RAID is one of its primary benefits," concurs Reichman, adding that it's one of the reasons enterprise RAID leaders such as NetApp (800/206-5363; www.netapp.com) use a software-centric architecture for all of its products.

By eliminating dedicated hardware, software RAID designs are much less expensive. A typical HBA may run from \$400 to upwards of \$900, according to Mills, while a software RAID using a separate multiport I/O board such as Ciprico's RAIDCore is closer to \$150. An even less expensive option, perhaps as little as \$10, is an integrated ROC (RAID-on-Chip) with a software RAID driver.

RAID-On-Chip: A Hybrid Approach

RAID-on-Chip designs incorporate an I/O offload processor directly on the server motherboard or I/O board. "What ROC does is add RAID assist to the general-purpose processor," says Schulz. "Even though the general-purpose processor has a lot of compute power that may be lying around, you

still have specialized functions that are handled better by that offload processor instead of just throwing brute CPU cycles on it."

Intel (www.intel.com) collaborated with LSI (www.lsi.com) starting in 2003 to incorporate ROC functionality and now offers a range of SAS and SATA RAID products on many of its server motherboards. Schulz notes that ROC functionality is added either via a separate chip or is increasingly integrated directly into the server chipset. Nvidia (www.nvidia.com) also includes RAID features in some chipsets, Mills says, adding that Ciprico is working to provide enterprise-class RAID functionality via a so-called virtualized adapter for both Intel and Nvidia systems.

Software RAID & The SME

Schulz feels that software RAID is particularly attractive for lower-end embedded systems because its value proposition is cost avoidance. Reichman concurs that a sweet spot for software RAID is the embedded market, adding that given the complexities of benchmarking performance and cost trade-offs of various RAID designs, "it makes sense for the storage vendors to do it right" and determine the optimal mix of hardware and software.

While Reichman believes that software RAID is appropriate for most applications, virtual servers are one area in which he advises caution. "In VMware, the whole

point is to pool images and increase CPU utilization," he says, "so you want all of your processing for VM images." In this scenario, even small increases of CPU load due to RAID processing could be deleterious. Of course, as Gartner analyst Roger Cox points out, most VMware implementations use a storage network with dedicated external RAID arrays, so an internal software-based controller is unnecessary.

RAID implementations are no longer limited to a binary choice between OS-based software and a dedicated hardware board. Software RAID solutions, along with add-on I/O boards or motherboard-based ROC hardware assist, provide a continuum of hybrid hardware-software options that allows users to select the optimal balance of price and performance.

Software-Assisted RAID Vendors & Products

Vendor/URL	Products	Description
Adaptec www.adaptec.com	Entry-level cards with HostRAID technology	4- and 8-port controllers with support for either SATA-only or SAS/SATA featuring Adapted HostRAID, an integrated RAID technology that maximizes system performance and uptime
ATTO www.attotech.com	ExpressSAS RAID Adapters	A low-profile RAID solution for 3Gb SAS and SATA with eight external ports; combined support for both SAS and SATA drive technologies enables multitiered storage architecture, balancing internal and external drive connectivity to accommodate a variety of application needs
Ciprico www.ciprico.com	RAIDCore	Offers a wide range of price and performance featuring a unified RAID driver and management software and the ability to span RAID across controllers without incurring additional parity drive penalty
Intel www.intel.com	Integrated Server RAID PCI Express-based RAID Controllers	Using the LSI SAS1078 SAS RAID-on-Chip and MegaRAID solutions, Intel's RAID controllers and integrated ROC controller boards are designed to complement the new quad-core Intel Xeon processors; controller cards feature eight ports and support up to 240 SAS and SATA disks
Promise www.promise.com	FastTrak SAS RAID	Offers a cost-effective solution for implementing a RAID 0, RAID 1, RAID 5, or RAID 10 storage system with up to four high-performance SAS or SATA disk drives

Next-Generation Asset Management

Continued from Page 25

and telecommunications resource management and more specifically integrating with areas from change, configuration, and release management to incident and problem management to capacity planning, security, and more.

Because NGAM goes far beyond traditional tools and traditional organizational models, it will require new organizational, process, and even political models for it to fully come of age within IT. For many, taking a holistic view of asset management may require rethinking asset management strategies. At the outset, it may simply require merging accurate inventory with other asset management tools and processes, but over the long haul, it's about linking assets to value, and the value IT provides is in the delivery of services.

The shift to next-generation asset management is likely to have a significant impact on SMEs. "EMA sees a lot of innovation in companies of various sizes, and often smaller companies lack the political problems that stagnate larger enterprises in evolving towards a next-generation approach," Drogseth notes. "Sophistication, not size, is what counts."

Advantages

The benefits of implementing a true NGAM strategy can far outweigh the energy and cost of getting there. NGAM helps SMEs answer the key questions surrounding their often-nebulous IT investments: What are they? Where are they? Who's using them and the services they support? What do they cost, not only upfront but their associated ongoing TCO?

Armed by NGAM with this knowledge, an organization can establish a foundation for IT planning, including choosing new investments based on complete knowledge of the asset base and allocation of resources based not on old provincial boundaries but on true current business need.

Reaching this heightened state of being requires that NGAM intersect with other management disciplines and integrate with specific management areas. "This is evolution, not likely revolution," explains

Drogseth. "Business should proceed in tangible, pragmatic phases based on leadership, process awareness, and available technology as they map to business priorities." Next-generation asset management may take IT asset management away from reactive technology-for-technology's sake to a proactive structure based on quantifiable business value.

Sechio adds, "A strategic ITAM program can help executives and managers not only mitigate the risks and costs associated with these challenges but also help them optimize their technology investments for the enterprise."

The benefits of a true next-generation asset management strategy can far outweigh the energy and cost of getting there.

STORAGE FEBRUARY 1, 2008

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SIX QUICK TIPS

Provide VPN Access For Your SME

by Robyn Weisman

As ORGANIZATIONS SPREAD OUT and become more mobile, secure network connectivity offers even the smallest SME strategic advantages and cost savings. Therefore, a VPN can play an important role in providing secure, effective communication.

VPN is a communications security technology to provide private and secure access to corporate network applications, data, and other resources. Setting up a VPN does require some amount of forethought. Here are some tips to get you started.

Get Backing From The Management Team

Lance Geeck, IT manager at Advisys (formerly Kettley; www.advisys.com), says before you do anything else, make sure your company's executives are on board so they will fund the project. "Often, executive management has so many different priorities vying for funding that they may have trouble seeing the benefits of VPN technologies vs. all the other competing projects," he says.

Granted, some companies may not need to spend the money on VPN access, Geeck notes. But at least in his experience, VPN access offers improved productivity, an aspect that tends to please the average executive. "If you have salespeople traveling, the value is immediately apparent and easy to sell," Geeck says. "While the sales representative is waiting at the airport, they are responding to their email, writing and submitting proposals, checking on product status, and are generally in better contact with the company and their customers."

Geeck says that VPN access has improved cost savings and overall employee productivity. "We needed to bring on additional contractors for a big development push. Since the headcount outnumbered our offices, we set them up with VPN access, and they worked offsite," says Geeck. In addition, all Advisys' executives use VPN connections and can put in little bits and pieces of work without having to drive into the office or significantly disrupt their family lives, which can be valuable during the crunch times.

Create A Corporate Security Policy

Chris Witeck, director of product marketing at SonicWALL (www.sonicwall.com), says that before you can deploy VPN technology, you must define your organization's access security policy in writing. According to Witeck, you want to create one set of policies for managed devices, such as companyowned laptops, and a separate set for unmanaged devices, such as home networks for remote workers. The latter group has greater inherent risk factors because IT does not directly oversee it.

Witeck says that your policy must define degrees of access based on a user's role in the organization because he finds it easier to consider a security policy in terms of employee function rather than for individual users or groups. "Users' roles will directly affect the level of access they should have, the specific resources they should be able to access, and the security requirements for authorizing access, both for them and their wireless devices," Witeck says. "Once defined, make sure your access security policy is understood by all internal employee and third-party wireless users."

Enable Seamless Roaming

You should consider making use of Wi-Fi and wide-area cellular so that your employees may seamlessly roam between them, says John Knopf, director of product management at mobile network software provider Net-Motion Wireless (www.netmotionwireless.com). "In a typical scenario today, workers must manually switch their connection and then re-authenticate or re-log in to applications. Continuous and hands-free connectivity enables mobile workers to focus on their jobs, not the technology," Knopf says.

This route allows you to create unique policies for different networks. "By deploying a mobile VPN, you can enable workers to seamlessly transition between the fastest available or most cost-effective network without manual intervention and also monitor devices, such as laptops and PDAs, from a central location, regardless of network," says Knopf.

At the same time, set up site-to-site VPNs between remote offices instead of a series of individual networks, says Advisys' Geeck. This will reduce the initial costs for setting up the system and save on maintenance.

"Doing site-to-site allows each of the remote offices to be part of the same corporate intranet with access to the same resources," says Geeck. He explains that a site-to-site VPN requires that the remote office have a network installed and high-speed

Internet. The systems administrator sets up the VPN client for the remote office and configures that hardware to allow the secure communications to and from the main office.

February 29, 2008

Safeguard Data-At-Rest

According to Witeck, data-at-rest refers to the information physically residing on a device, even when the device is not connected to the network, such as when an employee takes a laptop home. "For managed devices,

BONUS TIPS

Pick one solution for enforcing your remote access policy across all users and device types. Chris Witeck, director of product marketing at SonicWALL (www.sonicwall.com), warns that maintaining different solutions for employees and partners or smartphones and laptops can lead to policy conflicts between them. Therefore, Witeck recommends that you centralize deployment, administration, and policy by using a single remote-access solution. A single solution will ease IT overhead and reduce the TCO, Witeck says.

Take advantage of early adopters in your organization. Lance Geeck, IT manager at Advisys (formerly Kettley; www.advisys.com), says early adopters will drive your VPN project to success because they have the patience to learn the technology, learn it faster than most people, and provide support to your less technologically capable users. "Early adopters will start figuring out how best to use VPN to their advantage, so be sure to communicate with them and incorporate their findings into your training program," says Geeck.

Moreover, Geeck says early adopters will spread the word about how cool it is to access the corporate network from home, the car, or the train, adding that their excitement is contagious. "The word will spread organically at this point, helping to sell the rest of the user community on the concept," Geeck says.

make sure the device is lockable and deploy a suitable solution that requires the user to authenticate," Witeck says, adding that you should consider implementing appropriate encryption software on each device, as well.

Witeck recommends access control policies that specifically restrict sensitive data types, such as Social Security or credit card database information, from being downloaded to an unmanaged device. You might achieve this by limiting sensitive information to read-only status or by applying a terminal services or virtual desktop approach, such as Windows Terminal Services over Citrix.

"You should also mandate what data-atrest security applications must be resident on a particular endpoint device type in order to permit access," Witeck says.

BEST RETURN ON INVESTMENT:

Choose Your Vendors Wisely

Lance Geeck, IT manager at Advisys (formerly Kettley; www.advisys.com), offers this tip based on first-hand experience. "Make sure your system is secure by working with top-tier VPN vendors. The top-line vendors will provide VPN and firewalls that are secure and are constantly improving the level of security and services that they are offering," he says. "Going with the lesser brands, you will find they are slower to respond to new threats that may be introduced."

According to Geeck, VPN and firewalls work hand-in-hand, making it important to check out firewall information when drafting your VPN implementation. Fortunately, VPN and firewall

vendors are intensely competitive, which drives service, performance, and innovation. Geeck recommends leveraging the Internet when researching to find the best combination of features, services, support, price, and corporate stability.

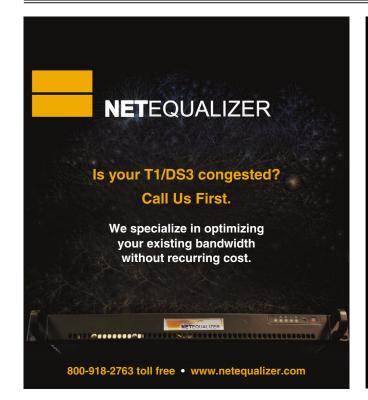
Geeck adds that top vendors push out patches regularly to improve VPN protection and that these patches rarely disrupt your VPN networks. But whatever you do, make sure to check with your chosen vendor that the annual maintenance contract it offers covers support troubleshooting. "This can be invaluable if you come across a difficult problem. If not, it could cost you thousands of dollars to resolve an issue," Geeck says.

BEST TIP:

Confirm Identity & Integrity Of Access Devices

Chris Witeck, director of product marketing at secure networking provider SonicWALL (www .sonicwall.com), points out that a compromised device is insecure even if its user is valid; therefore, your system must be able to authenticate that the device meets your established security policy requirements.

"For example, you might require that the solution checks the device to confirm it has recently run a current-version antivirus software scan or that it contains a currently valid corporate device certificate," Witeck says. "The endpoint control features found in certain NAC and SSL VPN solutions can be successfully applied to these requirements."



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WHAT'S HAPPENING

Reduce Bypass Airflow

Upsite Technologies Provides Data Center Sealing Solution

by Julie Ritzer Ross

EQUIPMENT IN DATA CENTERS is producing more and more heat these days, and the amount of money companies must spend to cool it is also rising. In fact, according to The Uptime Institute, electricity consumed by such equipment generates the bulk of data center infrastructure costs. Statistics the institute released also indicate that unsealed cable openings are preventing 50 to 80% of valuable conditioned air from reaching IT equipment's air intake. Hot spots, cooling unit inefficiencies, and, consequently, higher infrastructure costs are unwelcome byproducts of this lost air, or "bypass airflow."

Upsite Technologies (505/946-3463; www.upsitetechnologies.com), headquartered in Santa Fe, N.M., offers an alternative to the solutions some data centers use to handle bypass airflow coming from floor openings made for cable: its patented Kold-Lok Raised Floor Grommets. "The problem with using foam, cardboard, pillows, etc. to seal cable openings and guard against bypass airflow is that they are removed for recabling once every several months," says Peter Crook, Upsite's president. "Then these labor-intensive solutions are rarely reinstalled—resulting in the return of bypass airflow to the place it originally was in the data center, typically within six months."

A Tight Fit

KoldLok products reduce bypass airflow by serving as a tight seal for a variety of standard and custom raised-floor openings. A patented design makes them easy to snap in and out and keeps them in place, eliminating the need for any additional equipment, monitoring, and labor. Effectively sealing floor openings of all types increases cooling unit capacity, decreasing the need for additional cooling equipment and the expenditures that accompany it, Crook explains. Other benefits of airflow reduction afforded by the tight seal with KoldLok products include improved equipment reliability, extended equipment life, enhanced air delivery through perforated tiles and floor grates, and a reduced carbon footprint that contributes to heightened energy efficiency.

The line encompasses a variety of raised floor grommets designed for several different applications. KoldLok Integral Raised Floor Grommets are airflow management devices intended to seal cable openings in new raised-floor systems before communication or power cabling is installed. KoldLok Surface Mount Raised Floor Grommets are configured to seal a range of existing raised-floor tile cutouts and allow the flexibility of removing tiles without capturing cables. KoldLok Extended Raised Floor Grommets are designed for sealing a variety of existing larger openings and offer the option of modification to accommodate unique openings.

Upsite Technologies also offers Kold-Works, an integrated portfolio of engineering, remediation, and educational services to diagnose and recover cooling capacity. "Most computer rooms have three times more cooling than is required by the heat load and still have hot spots," says Crook. "KoldWorks identifies what is really happening and then tunes up the investment a customer already owns without the construction risk and investment required for installing additional capacity. The analogy is tuning up a car that is running only on a three-cylinder

engine to run on all eight it has, instead of buying a whole new car."

Exploring The Science Of Cooling

Little was widely known about the science of computer room cooling when Upsite was founded in 2001, Crook says. "Opinions abounded, but minimal scientific research had been performed," he notes. In 1994, during his tenure at IBM, Upsite Technologies senior Robert "Dr. Bob" Sullivan recom-



mended that a "hot and cool aisle" configuration be implemented in data centers. Almost eight years later, however, few operations had followed his suggestion.

Yet Sullivan insisted that continuing to flood computer rooms with massive overcooling to compensate for rising heat densities was increasingly inefficient and risky from a hardware reliability standpoint. To confirm the validity of this statement, Upsite Technologies sponsored an original research project Sullivan conducted in 19 different computer rooms. "The research revealed how computer room cooling actually occurred, and the waste discovered was shocking," Crook says. "More than 60% of the cooling in the typical computer room was wasted because the air was escaping through perforated tiles in the hot aisle and through unblocked cable openings."

The KoldLok line was Upsite Technologies' response to this challenge, and it continues to market the products as the standard for sealing raised floor openings in data centers. Crook notes that another differentiation point for the company is its effort to

develop solutions that comprehensively address customers' needs without making installation a complicated process.

"Users often tell us our products are 'so simple,' and that's true," says Crook. "Yet, there is much more to the story. We think our products are elegantly engineered because their very simplicity hides the thought and design that actually went into making the solution. Depending upon the product, you can't install them wrong because we've made the process goof-proof."

Crook adds, "Our biggest sales task is to get sample product physically into potential customers' hands. Once we have done this, the elegance and sturdiness of the product will sell itself."

Addressing Key Concerns

Most recently, Upsite has been developing products aimed at preventing internal hot air recirculation. HotLok, its newest introduction, comprises a line of next-generation blanking panels that keep hot air from recirculating within racks and provide a "virtually perfect seal," Crook says. The products come in designs to fit all types of 19-inch racks, allowing for a standardized data center rack appearance. Both one- and two-rack versions are offered in response to customer feedback, according to Crook.

All HotLok products are stackable to guard against damage and conserve storage space while they are being recycled from one rack to another. They may be used with the Upsite Temperature Strip liquid-crystal thermometer to monitor air temperature and ensure it remains acceptable.

"The sculpturally pleasing appearance of HotLok hides many engineering benefits," notes Crook, adding that Upsite will soon "go to market with thermal pictures of competing blanking panels to demonstrate the dramatic improvement HotLok makes in really preventing internal hot air recirculation."

Upsite is now turning its attention to other concerns: making data centers more "green" and minimizing the rise in costs that stems from increased power and cooling needs.

THREE QUESTIONS

Information-Gathering Tools

Northwest Performance Software Facilitates Network Discovery

by Julie Sartain

Northwest Performance Software (www .nwpsw.com), founded in November 1997, develops tools for network security, network administration, network training, Internet forensics, and various fields of law enforcement related to Internet crimes, with its best-known being NetScanTools Pro. It also offers the Managed Switch Port Mapping Tool, which communicates with a managed Ethernet switch via SNMPv1/v2c and maps the physical port connections to MAC and IP addresses of the attached devices.

What are the biggest IT-related issues facing today's small to midsized enterprise?

SMEs face many IT issues, ranging from network security to asset management, notes Northwest Performance President and Founder Kirk Thomas. At the same time, IT departments must work on a limited budget and deal with legacy systems.

Another challenge the IT departments of these companies face is how to keep track of network assets and know which assets are active in a dynamic environment, continues Thomas. This is especially important when the people tasked with mapping and/or maintaining existing network assets are not the people who deploy them. Replacement of existing networking hardware can also necessitate a need to know the current connection layout of the network.

■ What should *Processor* readers know about your company's products?

Northwest Performance Software produces software products, designed to be used with

Microsoft Windows operating systems, for networking professionals in a wide range of industries. These software tools facilitate the network discovery process. End users are typically network administrators, Internet investigators, and law enforcement.

The Managed Switch Port Mapping Tool was designed for a network manager to map a network and determine the current inventory of devices connected to a network switch. Business networks generally have many static devices that do not change IP addresses; however, there can be a significant component of network devices that obtains their IP address dynamically. This tool helps track that and allows the network manager to take a snapshot of the devices attached to the ports of the network switch. The mapped results are presented in a spreadsheet-like grid that can be exported to any spreadsheet software.

According to Thomas, NetScanTools Pro uses both active and passive methods to discover devices. It also has many useful tools to discover aspects of a network both local and beyond. For a network administrator who wants to assess the state of the networks within his control, these tools rapidly find devices connected to those LANs. Investigators can determine ownership of IP addresses and/or domains, discover devices hidden on a network, check packet traffic, and locate connectivity.

"The NetScanTools Pro network toolkit has been called a 'does-everything' utility and offers something for everyone," says Thomas. "It can be used for security testing, network information gathering, reconnaissance, and discovery."

In addition, says Thomas, administrators and security specialists can take NetScanTools Pro with them to remote locations or, with the new USB version, use the software on several machines without actually installing it on those machines. This saves time and allows these individuals to run the program wherever and whenever it's needed.

■ What makes your company unique?

"Value and performance at a low price sets us apart from other competitive solutions," says Thomas. "We have been producing network information-gathering tools for over 10 years, and our tools are known for their stability and thoroughness. We were one of the first companies to offer an integrated network toolset at an affordable price."

Northwest Performance Software designs its products around its customers' feedback and individual requirements. "As a small company, we can often implement suggestions and solutions to customers' problems much faster than our larger competitors," says Thomas. Last year, for example, the company released several versions of both of its products in direct response to customer suggestions and requests.

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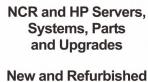
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